Federation Proceedings

VOLUME 9 *March 1950* NUMBER 1, PART II

THIRTY-FOURTH ANNUAL MEETING

ATLANTIC CITY, NEW JERSEY, APRIL 17–21, 1950

General Information

REGISTRATION

Registration will open at 9:00 A.M. on Monday, April 17, in Convention Hall and will continue through Friday, April 21. The registration fee will be $4.00. It is urged that registration be completed on Monday, if possible, since scientific sessions will begin promptly at 9:00 A.M. on Tuesday. The official badge, issued at the time of registration, will be necessary for admittance to all meetings and activities of the Federation. Ladies who are present as guests may register without charge at a special desk in the foyer of the Hall.

SCIENTIFIC SESSIONS

The scientific sessions of the six constituent societies will be held in Convention Hall beginning at 9:00 A.M., Tuesday, April 18, and continuing through Friday afternoon, April 21. The Joint Session of the Federation will be held in the Ballroom, Convention Hall, Tuesday evening at 8:00 P.M. Motion pictures will be shown in the Ballroom at 8:00 P.M. Wednesday evening.

COUNCIL AND EXECUTIVE COMMITTEE MEETINGS

Sunday and Monday, April 16 and 17, will be devoted to meetings of the Councils of the Societies, the Federation Executive Committee and various special committees. A list of these meetings and their locations will be found on page 483.

EXHIBITS

Scientific and Member exhibits will be located in the arena of Convention Hall and will be shown from Tuesday through Thursday afternoon. See page 477 for a list of exhibitors.

PLACEMENT SERVICE

The Federation Placement Service will be open Monday through Thursday, 8:00 A.M. to 5:00 P.M., and Friday, 8:00 A.M. to 1:00 P.M., to arrange interviews between employers and applicants. *Location:* south side of the arena, street floor of the Convention Hall.

SCHEDULE:

Registration of Applicants: Sunday, 2:00 to 5:00 P.M.; Monday, 8:00 A.M. to 5:00 P.M. Late registrations end Wednesday, 5:00 P.M.

Advance registrations accepted until April 10. New applicants may obtain registration forms from the Federation Secretary. Applicants, already registered with the Placement Service, who will attend the meetings are asked to notify the Federation Secretary before April 10 to insure that their records will be taken to the meeting.

Registration of Employers: Monday through Wednesday, 8:00 A.M. to 5:00 P.M., Thursday, 8:00 A.M. to 1:00 P.M.

Interviews: Tuesday through Thursday, 8:15 A.M. to 5:00 P.M.; Friday, 8:15 A.M. to 1:00 P.M.

All applicants are advised to report as promptly as possible after arrival at the Applicants' Registration Room, to register, to record local address and to receive information about interview scheduling. Employers will be unable to examine applicants' records until applicants have reported arrival and completed registration. It is advisable to bring copies of vitae, records, bibliographies and any additional material for interviews with employers. Employers are advised to register as early in the week as possible in the Employers' Registration Room to insure interviews with applicants of their choice.

SPECIAL FUNCTIONS

An informal Mixer will be held in the arena of the Convention Hall on Wednesday evening from 9:30 P.M. An orchestra will furnish music for dancing. The official badge is all that is necessary for admission.

Programs, abstracts and tickets to special functions will be on sale in the foyer of the Hall near the information desk. See pages 483 and 484 for a list of special activities, group dinners, and meetings and their locations.

HEADQUARTERS HOTEL

The Hotel Traymore will be the Federation and Society Headquarters.

Federation Program

JOINT SESSION OF THE FEDERATION

TUESDAY, APRIL 18, 8:00 P.M.

BALLROOM, CONVENTION HALL

Chairman: C. G. KING

1. Studies related to the adrenal cortex. EDWARD C. KENDALL. *Mayo Foundation, Rochester, Minn.*
2. Biological and physiological aspects of choline. CHARLES H. BEST. *Univ. of Toronto, Toronto, Ontario, Canada.*
3. Biochemical aspects of genetics. GEORGE W. BEADLE. *California Inst. of Technology, Pasadena.*
4. Biosynthesis of nucleic acids in the mammal. GEORGE B. BROWN. *Sloan-Kettering Inst. for Cancer Research, New York City.*

MOTION PICTURES

WEDNESDAY, APRIL 19, 8:00 P.M.

BALLROOM, CONVENTION HALL

Chairman: C. R. TREADWELL

1. Action of valves of the beating mammalian heart with simultaneous records of the E.C.G., vibrations and sounds. HIRAM E. ESSEX, H. L. SMITH* AND E. J. BALDES. *Mayo Clinic and Mayo Foundation, Rochester, Minn.* (Physiol.)
2. Blood flow in transillumined membranes after stasis and under pathological and traumatic conditions. GEORGE P. FULTON AND ROBERT P. AKERS (introduced by LELAND C. WYMAN). *Dept. of Biology, Boston Univ., Boston, Mass.* (Physiol.)
3. Explosive decompression of monkeys to extreme altitudes. GEORGE GELFAN. *Lab. of Physiology, Yale Univ. School of Medicine, New Haven, Conn.* (Physiol.)
4. Factors influencing contraction of embryonic heart cultures. MACHTELD E. SANO (introduced by DEAN A. COLLINS). *Dept. of Tissue Culture, Temple Univ., Med. School and Hospital, Philadelphia, Penn.* (Physiol.)
5. Kinetic pathology. MACHTELD E. SANO (introduced by VALY MENKIN). *Dept. of Tissue Culture, Temple Univ. Med. School and Hospital, Philadelphia, Penn.* (Pathol.)
6. Experimental addition to barbiturates. HARRIS ISBELL, SOL ALTSCHUL,* C. H. KORNETSKY,* H. F. FRASER,* H. G. FLANARY,* A. J. EISENMAN, A. WIKLER AND HARRIS HILL.* *Research Division, USPHS Hospital, Lexington, Ky.* (Pharmacol.)

FEDERATION MIXER

WEDNESDAY, APRIL 19, 9:30 P.M. — AUDITORIUM, CONVENTION HALL
Refreshments and Dancing — *Admission by badge*

An asterisk* following an author's name indicates "by invitation."

THE AMERICAN PHYSIOLOGICAL SOCIETY

Fifty-ninth Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Circulation: Clinical, etc.

BALLROOM

Harold D. Green, *Chairman*

1. Phases of ectopic ventricular activity following experimental coronary occlusion. A. SIDNEY HARRIS. *Baylor Univ. College of Medicine, Houston, Texas.*
2. Effect of a plastic prosthesis for mitral valves in dogs. G. REHMI DENTON,* BENEDICT MASTRIANNI,* CURTLAND BROWN, JR.* AND HAROLD C. WIGGERS. *Albany Med. College, Union Univ., Albany, N. Y.*
3. Coronary vasodilation following intracoronary injections. R. W. ECKSTEIN,* J. CHAMBLISS,* J. DEMMING* AND K. WELLS. *Western Reserve Univ., Cleveland, Ohio.*
4. Exercise following whole-body irradiation of mice. FALCONER SMITH AND WILLIE W. SMITH. *Natl. Insts. of Health, Bethesda, Md.*
5. Auricular pressure during exercise in dogs with decreased cardiac competence and cardiac failure. A. C. BARGER, B. B. ROE AND G. S. RICHARDSON (introduced by E. M. LANDIS). *Harvard Med. School, Boston, Mass.*
6. Observations on reflex regulation of circulation. LYSLE H. PETERSON (introduced by M. E. MAXFIELD). *Univ. of Pennsylvania Med. School, Philadelphia.*
7. Changes in vital capacity following release of tourniquets obstructing venous return. I. F. S. MACKAY. *Univ. College of the West Indies, Jamaica.*
8. Venous pressure in the foot of the erect human during quiescence. J. P. HENRY, O. H. GAUER* AND E. E. MARTIN.* *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*
9. Maximal oxygen intake and renal plasma flow in patients with aortic insufficiency. AUSTIN HENSCHEL, THOMAS B. GIBBONS* AND CARLETON B. CHAPMAN.* *Univ. of Minnesota, Minneapolis.*
10. Intestinal blood flow. JOHN W. BEAN AND M. SIDKY MOHAMED.* *Univ. of Michigan, Ann Arbor.*

TUESDAY, APRIL 18, 9:00 A.M.

Nervous System: Nerve

ROOM 20

Detlev W. Bronk, *Chairman*

11. Lipids of peripheral nerve after nerve crush. A. R. MCNABB* AND R. J. ROSSITER. *Univ. of Western Ontario, London, Canada.* (Biochem.)
12. Uptake of phosphate by frog axons. L. J. MULLINS (introduced by FRANK BRINK). *Johns Hopkins Univ., Baltimore, Md.*
13. Potassium shifts in nerve. A. M. SHANES. *Georgetown Univ. School of Medicine, Washington, D. C.*
14. Increased sodium entry into squid giant axons during activity at high frequencies and reversible inactivation of cholinesterase. HARRY GRUNDFEST AND DAVID NACHMANSOHN. *College of Physicians and Surgeons, Columbia Univ., New York City.*
15. Sodium as inhibitor of potassium effect upon frog nerve fibers. ANDERS LUNDBERG (introduced by R. LORENTE DE NÓ). *Rockefeller Inst. for Med. Research, New York City.*
16. Electrical polarization and the oxygen consumption of nerve. CLARENCE M. CONNELLY* AND DETLEV W. BRONK. *Johns Hopkins Univ., Baltimore, Md.*
17. Electrically induced optical and structural changes in certain nerves and elodea cells. JULIAN M. TOBIAS AND SIDNEY SOLOMON.* *Univ. of Chicago, Chicago, Ill.*
18. Evidence for physiological activity in the nerve membrane in response to subthreshold stimulation. OTTO H. SCHMITT AND PETER A. STEWART.* *Univ. of Minnesota, Minneapolis.*
19. Threshold electrotonic potentials of nerve and muscle at different temperatures. GORDON M. SCHOEPFLE. *Washington Univ. School of Medicine, St. Louis, Mo.*
20. Effect of polarization on conduction velocity of frog nerve and its modification by KCl. ROBERT E. TAYLOR (introduced by H. A. BLAIR). *Univ. of Rochester, Rochester, N. Y.*
21. Conduction velocity of ulnar nerve in human subjects of different ages and sizes. IRVING H.

WAGMAN AND HENRY LESSE.* *Jefferson Med. College, Philadelphia, Pa.*

TUESDAY, APRIL 18, 9:00 A.M.

Endocrine: Thyroid, etc.

ROOM 21

Hudson Hoagland, *Chairman*

22. Renal tubular excretory mass and reabsorption of sodium, potassium and chloride in testosterone-treated and estradiol-treated female dogs. J. A. RICHARDSON* AND C. R. HOUCK. *Med. College of S. C., Charleston and Univ. of Tennessee, Memphis.*
23. Pharmacological blockage of pituitary activation in the rabbit and rat. CHARLES H. SAWYER, J. E. MARKEE AND JOHN W. EVERETT.* *Duke Univ., Durham, N. C.*
24. Parathyroids and vitamin D in mineral stress. ROY O. GREEP AND CLARY J. FISCHER.* *Harvard School of Dental Medicine, Boston, Mass.*
25. Parathyroid extract hyperphosphaturia in hypoparathyroidism. ALEXANDER J. MICHIE AND JEANNETTE MCCONNELL SHOREY (introduced by HOMER W. SMITH). *Univ. of Pennsylvania School of Medicine and Hospital of Univ. of Pennsylvania, Philadelphia.*
26. Relationship between thyroid activity as assayed by the thiouracil-thyroxine method and by the thyroid turnover of radioiodine in pair-fed rats. L. F. WOLTERINK AND C. C. LEE (introduced by W. D. COLLINGS). *Michigan State College, East Lansing.*
27. Effect of estrogen on iodine turnover in thyroids of rats and mice. L. F. WOLTERINK, C. C. LEE, K. OLSEN AND M. MURRAY (introduced by J. MEITES). *Michigan State College, East Lansing.*
28. Direct measurement of I^{131} thyroid gland uptake and turnover in relation to thyroid function. A. STONE FREEDBERG, DAVID L. CHAMOVITZ AND ALVIN L. URELES (introduced by H. L. BLUMGART). *Beth Israel Hospital and Harvard Med. School, Boston.*
29. Metabolism of I^{131} during acute adaptation to anoxia. LESTER VAN MIDDLESWORTH. *Univ. of Tennessee College of Medicine, Memphis.*
30. Uptake and conversion of radioactive iodine by thyroid gland in tourniquet shock in rats. MILTON W. HAMOLSKY,* ZYGMUNT S. GIERLACH* AND H. JENSEN. *Field Research Lab., Fort Knox, Ky.* (Biochem.)
31. Anti-thyroxine effects of thyroxine analogues. S. B. BARKER, H. B. DIRKS, JR.,* H. M. KLITGAARD,* S. WAWZONEK* AND S. C. WANG.* *State Univ. of Iowa, Iowa City.*
32. Influence of dietary protein or thyroglobulin on liver and plasma protein levels of thiouracil fed rats. J. H. LEATHEM. *Rutgers Univ., New Brunswick, N. J.*

TUESDAY, APRIL 18, 9:00 A.M.

Circulation: Capillary and Transfer

ROOM 22

Eugene M. Landis, *Chairman*

33. Depression of capillary responses to epinephrine by ferrous iron. J. M. CRISMON. *Stanford Univ., Stanford, Calif.*
34. Effects of varying dilutions of Ringer's solution on blood capillary bed of rat mesoappendix. THEODORE BALOURDAS* AND ROBERT CHAMBERS. *Washington Square College of Arts and Sciences, New York Univ., New York City.*
35. Circulation in membranes of the frog and hamster after stasis, trauma and under pathological conditions. BRENTON R. LUTZ, GEORGE P. FULTON* AND ROBERT P. AKERS.* *Boston Univ., Boston, Mass.*
36. Molecular diffusion and filtration from the capillary circulation of mammalian muscle. J. R. PAPPENHEIMER, E. H. RENKIN* AND L. M. BORRERO.* *Harvard Med. School, Boston, Mass.*
37. Quantitative determination of fluorescein passage through capillaries following ultraviolet irradiation of transparent rabbit ear chambers. EDWARD A. LICHTER* AND ALFRED A. SCHILLER. *Univ. of Illinois College of Medicine, Chicago.*
38. Transfer of proteins tagged with radioactive iodine from plasma into lymph. HERBERT D. FRIEDLANDER, PARKER ELROD, HOWARD J. CURTIS AND GEORGE R. MENEELY (introduced by WALTER E. GARREY). *Thayer Veterans Admin. Hospital and Vanderbilt Univ. School of Medicine, Nashville, Tenn.*
39. Exchange of albumin between plasma and lymph. H. S. MAYERSON AND KARLMAN WASSERMAN.* *Tulane Univ. School of Medicine, New Orleans, La.*
40. Permeability of the urinary bladder to radioactive phosphorus, mercury and gold. L. E. BURGESS,* D. T. ROLFE,* P. F. HAHN AND E. L. CAROTHERS.* *Meharry Med. College, Nashville, Tenn.*
41. Blood volume studies at 5280 feet altitude. DAVID M. HUEY* AND JOSEPH H. HOLMES. *Fitzsimmons General Hospital and Univ. of Colorado, Denver.*
42. Simultaneous blood volume determinations in dogs with dye (T-1824), carbon monoxide and

radioactive iron Fe^{55}. J. L. NICKERSON, L. M. SHARPE,* W. S. ROOT, T. C. FLEMING* AND M. I. GREGERSEN. *Columbia Univ. College of Physicians and Surgeons, New York City, and Brookhaven Natl. Lab., Upton, N. Y.*

TUESDAY, APRIL 18, 1:30 P.M.

Circulation: Pressure

BALLROOM

Alrick B. Hertzman, *Chairman*

43. Urine amine levels in normotensive and hypertensive subjects. EDWARD F. EDINGER, JR.* AND NORMAN S. OLSEN. *Washington Univ. School of Medicine, St. Louis, Mo.*
44. Effect of oral cinchona alkaloids on the circulation of dogs with experimental renal hypertension. INEZ GREENE* AND E. P. HIATT. *Univ. of North Carolina School of Medicine, Chapel Hill.*
45. Desoxycorticosterone hypertension in relation to hepatorenal mechanisms. BENJAMIN W. ZWEIFACH AND EPHRAIM SHORR. *Cornell Univ. Med. College and New York Hospital, New York City.*
46. Effect of adrenalectomy on 'salt' hypertension. LEO A. SAPIRSTEIN,* WILBUR BRANDT* AND DOUGLAS R. DRURY. *Univ. of Southern California School of Medicine, Los Angeles.*
47. Comparison of pressure and flow pulses in the unopened carotid artery of the dog. KENNETH E. JOCHIM. *Univ. of Kansas, Lawrence.*
48. Relation between pressure and flow in a vascular bed, and the validity of 'peripheral resistance.' ALAN C. BURTON, J. T. NICHOL,* F. GIRLING* AND WILLIAM JERRARD.* *Univ. of Western Ontario Med. School, London, Canada.*
49. Constancy of responses to intra-arterial injection of mecholyl in the isolated blood perfused extremity: perfusion with a pump-oxygenator system. BEN J. LAWRENCE, JR.,* ADAM B. DENISON, JR.,* J. MAXWELL LITTLE AND HAROLD D. GREEN. *Wake Forest College, Bowman Gray School of Medicine, Winston-Salem, N. C.*
50. Measurement of resistance in the human digital vascular circulation. MILTON MENDLOWITZ. *Mt. Sinai Hospital, New York City.*
51. Objective method for measurement of systemic arterial pressure in the human ear. EARL H. WOOD, EDWARD H. MORGAN* AND GABRIEL G. NAHAS.* *Mayo Fndn., Rochester, Minn.*
52. Intraarterial pressures before and after aortic resection for coarctation in man. ROBERT F. GROVER,* HENRY SWANN II* AND CLARENCE A. MAASKE. *Univ. of Colorado Med. Center, Denver.*

TUESDAY, APRIL 18, 4:30 P.M.

Physiology Business Meeting

ROOM 20

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

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TUESDAY, APRIL 18, 1:30 P.M.

General: Enzymes

ROOM 15

David B. Tyler, *Chairman*

53. Mechanism of fibrous pepsin-albumin digestion. TERU HAYASHI AND GEORGE A. EDISON. *Columbia Univ., New York City.*
54. Enzymatic activity of surface-denatured catalase. J. GORDIN KAPLAN (introduced by W. W. WALCOTT). *Columbia Univ., New York City.*
55. Isolation and characterization of two adaptive enzymes formed by yeast in response to maltose. S. SPIEGELMAN, M. SUSSMAN* AND B. TAYLOR.* *Univ. of Illinois, Urbana.*
56. Degradation of fatty acids to 'acetate' by neurospora. JOSEPH LEIN AND PATRICIA S. LEIN (introduced by W. W. SWINGLE). *Syracuse Univ., Syracuse, N. Y.*
57. Conversion of acetate and lactate to succinate in the intact mammal. JUI SHUAN LEE* AND NATHAN LIFSON. *Univ. of Minnesota Med. School, Minneapolis.*
58. Histochemical differentiation of substrate-specific alkaline phosphatases in the tissues of the rat. JONAS S. FREIDENWALD AND GERTRUDE D. MAENGWYN-DAVIES.* *Johns Hopkins Univ. and Hospital, Baltimore, Md.*
59. Acid phosphatases of chicken bone marrow. H. F. DIERMEIER* AND V. F. LINDEMAN. *Syracuse Univ., Syracuse, N. Y.*
60. Factors affecting quantitative comparison of direct and indirect effects of X-rays on enzymes. RUBERT S. ANDERSON. *Univ. of South Dakota School of Medicine, Vermillion, and Marine Biological Lab., Woods Hole, Mass.*
61. Anemia in the rabbit following treatment with relaxin. M. X. ZARROW AND I. G. ZARROW.* *Purdue Univ., Lafayette, Ind.*

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TUESDAY, APRIL 18, 1:30 P.M.

Nervous System: Muscle I

ROOM 20

Kenneth S. Cole, *Chairman*

62. Ratio of myosin to actin in synthetic actomyosin. S. S. SPICER AND J. GERGELY (introduced by LOUISE H. MARSHALL). *Natl. Insts. of Health, Bethesda, Md.*

63. Superprecipitation of actomyosin by inosine triphosphate. WILLIAM J. BOWEN AND S. S. SPICER.* *Natl. Insts. of Health, Bethesda, Md.*

64. Proteins obtained by long-continued mild extraction of whole mammalian muscles. WILLIAM R. AMBERSON, SYLVIA HIMMELFARB* AND CAROLYN M. STOUT.* *Univ. of Maryland School of Medicine, Baltimore.*

65. Nature of elastic mechanism in actomyosin threads. JEAN BOTTS AND MANUEL MORALES (introduced by KENNETH S. COLE). *Naval Med. Research Inst., Bethesda, Md. and Univ. of Chicago, Chicago, Ill.*

66. Nature of muscle membrane potential. GILBERT LING (introduced by R. W. GERARD). *Univ. of Chicago, Chicago, Ill.*

67. Electrical activity of single muscle fibers at the neuro-muscular junction. WILLIAM L. NASTUK. *Columbia Univ. College of Physicians and Surgeons, New York City.*

68. Membrane resting and action potentials from excitable tissues. J. WALTER WOODBURY AND LOWELL A. WOODBURY (introduced by JAMES E. P. TOMAN). *Univ. of Utah College of Medicine, Salt Lake City.*

69. Influence of tonic contracture upon the composition of mammalian skeletal muscle. ERNST FISCHER AND HELEN V. SKOWLUND.* *Med. College of Virginia, Richmond.*

70. Effects of excess potassium followed by Ringer's solution on responses of skeletal muscle. ARTHUR J. KAHN* AND ALEXANDER SANDOW. *Washington Square College of Arts and Sciences, New York Univ., New York City.*

71. Tolerance of excitability of excised muscle to drastic changes in electrolyte concentration of immersion fluid. E. H. BRUNQUIST AND J. B. HENDERSON (introduced by RICHARD W. WHITEHEAD). *Univ. of Colorado School of Medicine, Denver.* (Pharmacol.)

TUESDAY, APRIL 18, 4:30 P.M.

Physiology Business Meeting

ROOM 20

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

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TUESDAY, APRIL 18, 1:30 P.M.

Body Fluids, Salts

ROOM 21

John Field II, *Chairman*

72. Use of N-acetyl 4-aminoantipyrine in measurement of total body water in dog and man. EUGENE Y. BERGER,* BERNARD B. BRODIE,* JULIUS AXELROD,* MARCELLE F. DUNNING,* YETTA POROSOWSKA* AND J. MURRAY STEELE. *New York Univ., Goldwater Memorial Hospital, New York City.*

73. Critique of use of sulfanilamide and D_2O for determination of total body water in dogs. P. O. 'B. MONTGOMERY AND M. J. FOGELMAN (introduced by ARTHUR GROLLMAN). *Southwestern Med. School, Univ. of Texas, Dallas.*

74. Compensatory changes in the rat following depletion of extracellular electrolytes. ROBERT E. SEMPLE (introduced by WALTER S. ROOT). *Columbia Univ. College of Physicians and Surgeons, New York City.*

75. Effect of depletion of extracellular electrolytes on the water intake in dogs. LOUIS J. CIZEK,* ROBERT E. SEMPLE,* K. C. HUANG* AND MAGNUS I. GREGERSEN. *Columbia Univ. College of Physicians and Surgeons, New York City.*

76. Diuretic effects of sodium salts of organic acids in patients with cardiac and nephrotic edema. SAMUEL A. CORSON, ELIZABETH O'LEARY,* MITCHELL W. SPELLMAN,* ABRAHAM L. SIEGEL* AND ESTHER HARRISON.* *Toledo Hospital Inst. of Med. Research, Toledo, Ohio.*

77. Inability of desoxycorticosterone acetate to prevent the sodium excretion produced by

mammitol diuresis. R. B. HARVEY,* D. H. SIMMONS,* T. HOSHIKO* AND M. B. VISSCHER. *Univ. of Minnesota, Minneapolis.*

78. Effect of chronic underfeeding upon the electrolyte concentrations of the plasma, brain and muscle of rats. VIRGINIA D. DAVENPORT (introduced by LOUIS S. GOODMAN). *Univ. of Utah College of Medicine, Salt Lake City.*
79. Internal water exchange in normal and hypotensive dogs. M. J. FOGELMAN AND P. O. 'B. MONTGOMERY (introduced by CARL A. MOYER). *Southwestern Med. School, Univ. of Texas, Dallas.*
80. Body fluid redistribution in induced hypothermia and hyperthermia. SIMON RODBARD, HIROSHI SAIKI* AND ARTHUR MALIN.* *Michael Reese Hospital, Chicago, Ill.*
81. Water and electrolyte changes in rat intestine after total body x-radiation. E. E. PAINTER AND E. W. PULLMAN.* *Univ. of Ill. College of Medicine, Chicago.*
82. Simultaneous studies of heart and kidney functions in human subjects. D. M. GREEN, A. D. JOHNSON,* W. C. BRIDGES,* J. H. LEHMANN* AND F. GRAY.* *Univ. of Washington School of Medicine, Seattle.*
83. Effect of intravenous HCl—amino acids on plasma chloride. YALE J. KATZ (introduced by GEORGE E. FAHR). *St. Barnabas Hospital, Minneapolis, Minn.*

TUESDAY, APRIL 18, 4:30 P.M.

Physiology Business Meeting

ROOM 20

TUESDAY, APRIL 18, 8:00 P.M.

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BALLROOM

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TUESDAY, APRIL 18, 1:30 P.M.

Carbohydrate Metabolism

ROOM 22

W. H. Chambers, *Chairman*

84. Pyruvate metabolism in rabbit bone marrow. JOHN D. EVANS (introduced by DAYTON J. EDWARDS). *Cornell Univ. Med. College, New York City.*
85. Changes in muscle phosphorylase and hexokinase activities produced by inanition in the rat. E. S. GORANSON, NANCY M. DANOFF AND ELIZABETH F. PURDIE (introduced by E. A. SELLERS). *Univ. of Toronto, Toronto, Canada.*
86. Phosphate turnover in the liver of alloxan diabetes. JACOB SACKS AND BARBARA DAMAST.* *Brookhaven Natl. Lab., Upton, N. Y.*
87. Effect of insulin on the transport of certain substances across cell barriers. R. LEVINE, M. S. GOLDSTEIN* AND B. HUDDLESTUN.* *Michael Reese Hospital, Chicago, Ill.*
88. Glucose formation in the eviscerated rabbit. ARNE N. WICK,* DOUGLAS R. DRURY AND EATON M. MACKAY. *Scripps Metabolic Clinic, La Jolla, Calif.*
89. Effect of thiocarbonamide derivatives in alloxan diabetes. I. N. ROSENBERG AND M. S. RABEN (introduced by E. B. ASTWOOD). *New England Center Hospital and Tufts Med. School, Boston, Mass.*
90. Inhibitor of the insulin-inactivating system (insulinase) of liver. ROBERT H. BROH-KAHN, BEN SIMKIN* AND I. ARTHUR MIRSKY. *Jewish Hospital, Cincinnati, Ohio.*
91. Glycogen deposition in liver and interscapular fat body of the mouse. LOUISE MICKLEWRIGHT (introduced by J. WALTER WILSON). *Brown Univ., Providence, R. I.*
92. Ketosis in diabetic rats. CLARISSA H. BEATTY. *Univ. of Oregon Med. School, Portland.*
93. Net splanchnic glucose production in normal man and in various disease states. JACK D. MYERS (introduced by WALTER KEMPNER). *Duke Univ. School of Medicine, Durham, N. C.*

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Physiology Business Meeting

ROOM 20

TUESDAY, APRIL 18, 8:00 P.M.

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WEDNESDAY, APRIL 19, 9:00 A.M.

Circulation: Cardiac, Electrical

BALLROOM

Ashton Graybiel, *Chairman*

94. Ventricular complex of the electrocardiogram of birds. BRUNO KISCH. *Mt. Sinai Hospital and Yeshiva Univ., New York City.*

95. Abnormal electrocardiograms of chickens produced by K deficiency and effects of certain drugs on the abnormalities. PAUL D. STURKIE. *Rutgers Univ., New Brunswick, N. J.*

96. Effect of lithium on electrocardiogram of animals. VICTOR A. MCKUSICK (introduced by JAMES A. SHANNON). *U. S. Marine Hospital, Baltimore, Md.*

97. Analysis of the value 'K' in Bazett's formula. JANE S. ROBB. *Syracuse Univ. College of Medicine, Syracuse, N. Y.*

98. Excitability of mammalian heart during the cardiac cycle: the auricle. CHANDLER MCC. BROOKS, OSCAR ORIAS,* JEROME L. GILBERT,* ARTHUR A. SIEBENS,* BRIAN HOFFMAN* AND E. E. SUCKLING.* *Long Island College of Medicine, Brooklyn, N. Y.*

99. Refractory period and excitability of isolated auricle and papillary muscle of the cat. J. R. DIPALMA AND A. V. MASCATELLO.* *Long Island College of Medicine, Brooklyn, N. Y.*

100. Action potential of Purkinje tissue of the ox heart. HOWARD J. CURTIS AND DAVID TRAVIS.* *Vanderbilt Univ. Med. School, Nashville, Tenn.*

101. Spread of excitation process in ventricular myocardium of dogs. RAYMOND D. PRUITT (introduced by NORMAN M. KEITH). *Mayo Clinic, Rochester, Minn.*

102. Instantaneous electrocardiographic equipotential lines for right and left bundle branch block and left ventricular hypertrophy. ALEXANDER MAURO,* LOUIS H. NAHUM, HYMAN M. CHERNOFF* AND RAJINDER S. SIKAND.* *Yale Univ. School of Medicine, New Haven, Conn.*

103. Analysis of retrograde conduction to the atria from premature ventricular contractions. ALBERT D. KISTIN* AND MILTON LANDOWNE. *Veterans Administration, Washington, D. C.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Hypertension, Age, etc.

ROOM 15

Maurice B. Visscher, *Chairman*

104. Stress and certain biophysical alterations of blood in normotensive and hypertensive subjects. ROBERT A. SCHNEIDER (introduced by HAROLD G. WOLFF). *New York Hospital, New York City.*

105. Prophylaxis and therapeusis of experimental renal hypertension with renal extracts. J. P. KIELY,* J. M. KIELY,* BESS G. OSGOOD,* JOHN MARSHALL* AND G. E. WAKERLIN. *Univ. of Illinois College of Medicine, Chicago.*

106. Influence of pancreatectomy on lipid metabolism and atherogenesis in the chick. J. STAMLER,* C. BOLENE,* L. N. KATZ, R. HARRIS* AND R. PICK.* *Michael Reese Hospital, Chicago, Ill.*

107. Ineffectiveness of estrogens in inducing steroid depression in *Rana pipiens*. WILLIAM B. LANGAN (introduced by ISRAEL S. KLEINER). *New York Med. College, New York City.*

108. Age and serum cholesterol concentration in normal man. ANCEL KEYS, OLAF MICKELSEN, RUSSELL HAYES* AND ERMA V. O. MILLER.* *Univ. of Minnesota, Minneapolis.*

109. Longevity as a function of diet in the C3H mouse. JOSEPH T. KING AND M. B. VISSCHER. *Univ. of Minnesota, Minneapolis.*

110. Electrocardiographic age trends. E. SIMONSON. *Univ. of Minnesota, Minneapolis.*

111. Influence of muscular exercise on uric acid excretion in man. JOHN NICHOLS* AND A. T. MILLER, JR. *Univ. of North Carolina, Chapel Hill.*

112. Nitrogen retention produced by adenine. SIGWIN B. RASKA. *Univ. of North Dakota School of Medicine, University.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Nervous System: Localization

ROOM 20

Philip Bard, *Chairman*

113. Vomiting center. H. L. BORISON* AND S. C. WANG. *Columbia Univ. College of Physicians and Surgeons, New York City.*

114. Behaviorial and EEG changes following chronic brain stem lesions. D. B. LINDSLEY, L. H. SCHRINER,* W. B. KNOWLES* AND H. W. MAGOUN. *Northwestern Univ., Chicago, Ill.*

115. Thalamic loci of afferent stimulation in the cat. SYDNEY M. COHEN (introduced by FRED A. METTLER). *Columbia Univ. College of Physicians and Surgeons, New York City.*

116. Effects of lesions of human thalamus in the region of the dorsomedial nuclei. E. A. SPIEGEL, H. T. WYCIS,* H. SHAY, K. B. CONGER* AND H. K. FISCHER.* *Temple Univ. Med. School, Philadelphia, Pa.*

117. Non-olfactory functions of the pyriform-amygdaloid-hippocampal complex. WILBUR K. SMITH. *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

118. Pattern of localization in the precentral motor cortex of *Macaca mulatta*. C. N. WOOLSEY AND P. H. SETTLAGE.* *Univ. of Wisconsin Med. School, Madison.*

119. Cortical receptive zone of the chorda tympani. HARRY D. PATTON AND V. E. AMASSIAN.* *Univ. of Washington School of Medicine, Seattle.*

120. Cortical representation and spinal pathways of visceral afferents. V. E. AMASSIAN (introduced by T. C. RUCH). *Univ. of Washington School of Medicine, Seattle.*

121. Analysis of cerebral control of reflex pupillary dilatation in cat and monkey. WILLIAM CROSBIE WILSON (introduced by A. G. MULDER). *Stritch School of Medicine, Loyola Univ., Chicago, Ill.*

122. Discrimination of weights by men with penetrating lesions of parietal lobes. HANS-LUKAS TEUBER,* MORRIS B. BENDER AND WILLIAM S. BATTERSBY.* *New York Univ. College of Medicine, New York City.*

123. Psychomotor aspects of the orbitofrontal cortex. H. E. KING (introduced by CARNEY LANDIS). *New York State Psychiatric Inst., New York City.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Kidney: Blood Flow, etc.

ROOM 21

H. C. Bazett, *Chairman*

124. Rapid measurement of intrarenal and other tissue pressures. JOHN C. DAVIS, JR.* AND H. G. SWANN. *Univ. of Texas School of Medicine, Galveston.*

125. Factors influencing intrarenal pressure. A. V. MONTGOMERY (introduced by E. L. FORTER). *Univ. of Texas School of Medicine, Galveston.*

126. Studies on renal cortical ischemia using the recording photofluorometer. DAVID MINARD AND ELLIOTT F. OSSERMAN (introduced by ALBERT R. BEHNKE.) *Naval Med. Research Inst., Bethesda, Md.*

127. Possible renal vascular shunt in dogs during intravenous epinephrine. C. RILEY HOUCK. *Univ. of Tennessee, Memphis.*

128. Effect of acute experimental polycythemia on renal blood flow. MERRILL P. SPENCER, KIRKWOOD F. GLAUSER AND PHILIP W. HALL (introduced by J. M. HAYMAN, JR.). *Western Reserve Univ. Med. School, Cleveland, Ohio.*

129. Inulin clearance during pregnancy. ROY W. BONSNES AND WILLIAM A. LANGE.* *Cornell Univ. Med. College and New York Hospital, New York City.* (Biochem.)

130. Effect of desoxycorticosterone glucoside (DCG) on glucose reabsorption in the dog kidney. EDWIN H. KAUFMAN AND AGAMEMNON DESPOPOULOS (introduced by DONALD D. VAN SLYKE). *Rockefeller Inst. for Med. Research, New York City.* (Biochem.)

131. Effect of exercise on renal function in dogs. WILLIAM D. BLAKE (introduced by JOHN R. BROBECK). *Yale Univ. School of Medicine, New Haven, Conn.*

132. Alterations in renal hemodynamics and excretion of electrolytes. J. R. ELKINTON, A. P. CROSLEY, JR.,* H. G. BARKER* AND J. K. CLARK.* *Univ. of Pennsylvania, Philadelphia.*

133. Renal hemodynamic effects of Neosynephrine in man. A. P. CROSLEY, JR., JOHN K. CLARK AND HAROLD G. BARKER (introduced by JAMES E. ECKENHOFF). *Univ. of Pennsylvania, Philadelphia.*

134. Bladder function following acute denervation and in spinal shock. L. L. LANGLEY AND J. A. WHITESIDE (introduced by JOHN M. BRUHN). *Med. College of Alabama, Birmingham.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Innominate

ROOM 22

Edward F. Adolph, *Chairman*

135. Migration of lysine across the cell wall of *Streptococcus faecalis*. VICTOR A. NAJJAR AND ERNEST F. GALE.* *School of Biochemistry, Cambridge, Eng.* (Biochem.)

136. Permeability of *Escherichia coli*. R. B. ROBERTS AND R. T. NIESET (introduced by S. R. M. REYNOLDS). *Carnegie Inst. of Washington, Washington, D. C., and Tulane Univ., New Orleans, La.*

137. Effect of oxygen on the response of living cells to X-rays with special emphasis on bacteria. ALEXANDER HOLLAENDER, G. E. STAPLETON,* F. L. MARTIN.* *Oak Ridge Natl. Lab., Oak Ridge, Tenn.*

138. Blood volume of the rat measured by the tagged-erythrocyte dilution method. L. M. SHARPE,* G. G. CULBRETH* AND J. R. KLEIN. *Brookhaven Natl. Lab., Upton, Long Island, N. Y.* (Biochem.)

139. D_2O dilution space to measure body water—relation of body water to body size. JAMES D. HARDY* AND DAVID L. DRABKIN. *Univ. of Pennsylvania School of Medicine, Philadelphia.* (Biochem.)

140. Elimination of bromide from serum and cerebrospinal fluid. S. I. PATRICK* AND G. S. EADIE. *Duke Univ. School of Medicine, Durham, N. C.*

141. Characterization of corticosteroids released from perfused cow adrenals. OSCAR HECHTER. *Worcester Fndn. for Exper. Biology, Shrewsbury, Mass.*

142. Effect of adrenal steroids on growth of the chick embryo. D. A. KARNOFSKY, C. C. STOCK AND C. P. RHOADS (introduced by F. S.

PHILIPS). *Sloan-Kettering Inst. for Cancer Research, New York City.* (Pharmacol.)

143. Micro-method for determining carbohydrate components of gastric mucin. MORITZ MICHAELIS,* FRANKLIN HOLLANDER AND CARYL TARR.* *Mt. Sinai Hospital, New York City.* (Biochem.)

144. Bromsulfonphthalein as a tool for study of liver physiology. R. W. BRAUER, J. S. KREBS* AND R. L. PESSOTTI.* *Louisiana State Univ. School of Medicine, New Orleans.* (Pharmacol.)

153. Ether concentration in gas and blood samples obtained during anesthesia in man and analyzed by mass spectrometry. CECIL S. JONES,* EDWARD J. BALDES, ALBERT FAULCONER, JR.* AND JOHN SAARI (tech. assistant).* *Mayo Fndn., Rochester, Minnesota.*

154. Comparison of step-up and treadmill exercise using arterial blood and respiratory gas exchange measurements. HURLEY L. MOTLEY AND JOSEPH F. TOMASHEFSKI.* *Jefferson Med. College, Philadelphia, Pa.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Respiration: Gas Exchange

ROOM S

Fred A. Hitchcock, *Chairman*

145. Effects in dogs of inspiring 15–30% carbon dioxide. FLETCHER A. MILLER, E. B. BROWN, RICHARD L. VARCO (introduced by OWEN H. WANGENSTEEN). *Univ. of Minnesota, Minneapolis.*

146. Acclimatization of mice to high carbon dioxide and to low oxygen. ARTHUR B. OTIS. *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

147. Effects of inhalation of oxygen at high partial pressures upon arterial and internal jugular blood gas content, tension and *p*H. C. J. LAMBERTSEN, G. L. EMMEL, D. Y. COOPER, H. H. LOESCHCKE AND R. H. KOUGH (introduced by A. N. RICHARDS). *Univ. of Pennsylvania, Philadelphia, Pa.*

148. Effect of inhalation of oxygen at high partial pressure upon cerebral circulation and cerebral oxygen consumption in man. R. H. KOUGH,* D. Y. COOPER, JR.,* G. L. EMMEL,* H. H. LOESCHCKE,* C. J. LAMBERTSEN* AND C. F. SCHMIDT. *Univ. of Pennsylvania, Philadelphia.*

149. Simultaneous determination of bloodflow through each lung. H. RAHN AND H. T. BAHNSON.* *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

150. Comparison of the A-A gradient determined by different methods. BENJAMIN G. FERRIS, JR. (introduced by WILLIAM H. FORBES). *Harvard School of Public Health, Boston, Mass.*

151. Variation of respiratory quotient during normal and deep exhalation. RALPH W. STACY AND GEORGE H. KYDD, III.* *Ohio State Univ., Columbus, Ohio.*

152. Slope of the CO_2 curve obtained by breathing into the rapid infra-red gas analyzer. A. B. DUBOIS,* S. SOFFER,* R. C. FOWLER* AND W. O. FENN. *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Coagulation

BALLROOM

Harry P. Smith, *Chairman*

155. Factors in lability of thromboplastin solutions. CLIFFORD F. GERBER* AND ERNEST W. BLANCHARD. *Schieffelin and Co., New York City.*

156. Labile factor of prothrombin conversion: its consumption in normal and abnormal blood coagulation. BENJAMIN ALEXANDER, GRETA LANDWEHR AND ROBERT GOLDSTEIN (introduced by HERRMAN L. BLUMGART). *Beth Israel Hospital and Harvard Med. School, Boston, Mass.*

157. Interaction of fibrinogen and thrombin. DAVID F. WAUGH AND BETTY J. LIVINGSTONE.* *Massachusetts Inst. of Tech., Cambridge.*

158. Distribution and assay of inhibitors and accelerators of blood coagulation in extracts of organs of a normal and a hemophilic man. L. M. TOCANTINS AND R. T. CARROLL.* *Jefferson Med. College, Philadelphia, Pa.*

159. Inactivation of thrombin and fibrinogen by tyrosinase. IRWIN W. SIZER AND PHILIP F. WAGLEY.* *Massachusetts Inst. of Tech., Cambridge, Mass., and Johns Hopkins Hospital, Baltimore, Md.*

160. Heparin release in anaphylactic shock dogs. RICHARD P. WHITE AND PARKE H. WOODARD (introduced by O. O. STOLAND). *Univ. of Kansas, Lawrence.*

161. Dissolution of fibrin clots in presence of concentrated purified thrombin. M. MASON GUEST AND ARNOLD G. WARE.* *Wayne Univ. College of Medicine, Detroit, Mich.*

162. Fibrinolysokinase activity in tissues. JOHN H. FERGUSON AND JESSICA H. LEWIS. *Univ. of North Carolina, Chapel Hill.*

163. Effect of epinephrine and nor-epinephrine on whole blood coagulation. JEROME M. WALDRON (introduced by I. J. PINCUS). *Jefferson Med. College and Pennsylvania Hospital, Philadelphia.*

164. Pathogenesis of the plasma transfusion reaction. WILLIAM H. CROSBY AND MARIO STEFANINI (introduced by DAVID RAPPORT). *Joseph H. Pratt and New England Center Hospitals and Tufts College Med. School, Boston, Mass.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Nervous System: Muscle II

ROOM 20

Ralph W. Gerard, *Chairman*

165. Skeletal muscle as a source of plasma potassium during removal of potassium by vivodialysis. ROGER M. REINECKE AND FRANCIS L. STUTZMAN.* *Univ. of Minnesota, Minneapolis.*

166. Resumption of rhythmic contractions by amniotic muscle after solidification in liquid nitrogen. BASILE LUYET AND FEDERICO GONZALES.* *St. Louis Univ., St. Louis, Mo.*

167. Method for analyzing mechanical properties of smooth muscles stimulated by cooling. JOHN F. PERKINS, JR. AND WILLIAM H. JOHNSON (introduced by A. B. LUCKHARDT). *Univ. of Chicago, Chicago, Ill.*

168. Relation of quick stretch and twitch response in skeletal muscle. SHEPPARD M. WALKER. *Univ. of Louisville School of Medicine, Louisville, Ky.*

169. Relation of length to tension in double function muscles. J. E. MARKEE AND M. F. WILLIAMS.* *Duke Univ., Durham, N. C.*

170. Muscle potentials in various insects during flight. KENNETH D. ROEDER. *Tufts College, Medford, Mass.*

171. 'Resonance' of muscle to central stimulation. A. A. FOSTER (introduced by HANS LOWENBACH). *Duke Univ., Durham, N. C.*

172. Effect of lymphatic necrosis on neuro-muscular function (action potential, acethylcholine synthesis) of hypophysectomized animals. CLARA TORDA AND HAROLD G. WOLFF. *New York Hospital, Kingsbridge Hospital (V.A.) and Cornell Univ. Med. College, New York City.*

173. Electromyographic patterns in reinnervated muscles. MELVIN D. YAHR, ERNST HERZ AND JOSEPH MOLDAVER (introduced by PAUL F. A. HOEFER). *Columbia Univ. College of Physicians and Surgeons and Presbyterian Hospital, New York City.*

174. Unipolar electromyograms of patients with dermatomyositis. E. H. LAMBERT, SIBYL BECKETT,* C. J. CHEN* AND L. M. EATON.* *Mayo Foundation and Mayo Clinic, Rochester, Minn.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Kidney: Electrolytes, etc.

ROOM 21

Robert F. Pitts, *Chairman*

175. Recovery of glomerular and tubular function, including p-aminohippurate extraction, following 2 hours of renal artery occlusion in the dog. BETTY S. ROOF,* HENRY D. LAUSON, S. THEODORE BELLA* AND HOWARD A. EDER.* *Hospital of Rockefeller Inst. for Med. Research, New York City.*

176. Renal clearance mechanisms under pentobarbital sodium anesthesia. EWALD E. SELKURT AND KIRKWOOD F. GLAUSER.* *Western Reserve Univ. Med. School, Cleveland, Ohio.*

177. Effect of water diuresis on electrolyte excretion in normal man. JOHN R. URBACH, M. D. PHELPS, WILLIAM A. STEIGER, HARRY GOLD AND SAMUEL BELLET (introduced by PAUL R. DUMKE). *Heart Station, Philadelphia General Hospital and Univ. of Pennsylvania, Philadelphia.*

178. Potentiation of diuretic action of salyrgan by ammonium chloride. D. R. AXELROD,* J. N. CAPPS* AND R. F. PITTS. *Syracuse Univ. College of Medicine, Syracuse, N. Y.*

179. Effect of lithium on renal excretion of potassium. JAMES G. FOULKS,* GILBERT H. MUDGE* AND ALFRED GILMAN. *Columbia Univ. College of Physicians and Surgeons, New York City.*

180. Glomerular filtration—Tm_g relationships in the dog. JULES H. LAST, ISADORE PITESKY,* PAUL JORDAN, JR.* AND EPPERSON BOND.* *Univ. of Illinois College of Medicine, Chicago.* (Pharmacol.)

181. Effect of egg white injections on excretion of hemoglobin in the rat. RICHARD W. LIPPMAN AND HELEN J. UREEN (introduced by HARRY GOLDBLATT). *Cedars of Lebanon Hospital, Los Angeles, Calif.*

182. Effect of albumin on renal oxygen consumption in man. HAROLD G. BARKER, JOHN K. CLARK, ARCHER P. CROSLEY AND ALVIN J. CUMMINS (introduced by I. S. RAVDIN). *School of Medicine and Hospital, Univ. of Pennsylvania, Philadelphia.*

183. Effects of ureteral ligation on renal function in the anesthetized dog. O. W. SARTORIUS (introduced by W. D. LOTSPEICH). *Syracuse Univ. Med. College, Syracuse, N. Y.*

184. Kidney physiology of the desert rat *Dipodomys merriami*. BODIL SCHMIDT-NIELSEN. *Univ. of Cincinnati, Cincinnati, Ohio.*

185. Water and electrolyte excretion by the harbor seal (*Phoca vitulina, L.*). S. E. BRADLEY, G. H. MUDGE* AND W. D. BLAKE.* *Columbia*

Univ. College of Physicians and Surgeons, New York City, and Mt. Desert Island Biological Lab., Bar Harbor, Maine.

WEDNESDAY, APRIL 19, 1:30 P.M.

Gastro-Intestinal: Motility, Gall Bladder

ROOM 22

A. C. Ivy, *Chairman*

186. Valves of the hamster caecum. HUGO KRUEGER AND RUDY RIESCHEL, JR.* *Oregon State College, Corvallis.*

187. Effect of acclimatization on motility of small intestine during anoxia. EDWARD J. VAN LIERE, J. CLIFFORD STICKNEY AND DAVID W. NORTHUP. *West Virginia Univ. School of Medicine, Morgantown.*

188. Effect of anoxia on activity of the isolated intestine. T. C. WEST,* G. HADDEN* AND A. FARAH. *Univ. of Washington School of Medicine, Seattle.* (Pharmacol.)

189. Effect of x-irradiation on intestinal motility. ROBERT A. CONARD (introduced by HARVEY M. PATT). *Argonne Natl. Lab., Chicago, Ill.*

190. Accurate registration of intralumen pressures of the digestive tract by two new methods. J. P. QUIGLEY, DANIEL A. BRODY,* BILLY MCKAY,* W. C. LANDOLINA* AND J. H. MCALISTER.* *Univ. of Tennessee, Memphis.*

191. Bile cholesterol, bilirubin and physical constants in the rat. SANFORD O. BYERS, MEYER FRIEDMAN AND FRED MICHAELIS.* *Mt. Zion Hospital, San Francisco, Calif.*

192. Effect of insulin-induced hypoglycemia on contraction of the human gall bladder. W. J. SNAPE, RUSSELL WIGH* AND M. H. F. FRIEDMAN. *Jefferson Med. College, Philadelphia, Pa.*

193. Fragmentation of biliary calculi by ultrasound. HAROLD LAMPORT, HERBERT F. NEWMAN* AND RALPH D. EICHHORN.* *Yale Univ. School of Medicine, New Haven, Conn., and Beth Israel Hospital, New York City.*

194. In vitro inactivation of alpha-estradiol by infantile, malignant and cirrhotic rat liver. KARL E. PASCHKIS AND R. H. DEMEIO.* *Jefferson Med. College, Philadelphia, Pa.*

195. Effect of altered breakfast habits on physiologic response. W. W. TUTTLE AND KATE DAUM.* *State Univ. of Iowa, Iowa City.*

196. Appetite studies in a patient with complete esophageal obstruction and jejunostomy. FRANKLIN HOLLANDER AND HERBERT A. SOBER.* *Mt. Sinai Hospital, New York City.*

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Circulation: Cardiac Output

BALLROOM

W. F. Hamilton, *Chairman*

197. Evidence in circulatory shock of an isometric phase of ventricular contraction following ejection. OTTO H. GAUER (introduced by A. P. GAGGE). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

198. Mapping electrokymographic responses over the cardiac silhouette. GORDON C. RING, A. SOKALCHUK* AND G. J. NAVIS.* *Temple Univ. Med. School, Philadelphia, Pa.*

199. Use of ballistocardiogram as a measure of maximum force of cardiac contraction. ISAAC STARR. *Univ. of Pennsylvania, Philadelphia.*

200. Effect of reduced cardiac output on renal circulation. ROBERT M. BERNE AND MATTHEW N. LEVY (introduced by CARL J. WIGGERS). *Western Reserve Univ. Med. School, Cleveland, Ohio.*

201. Oximetric determinations of cardiac output in man at rest and mild exertion. JAMES O. ELAM,*WILLIAM SLEATOR, *W. N. ELAM* AND H. L. WHITE. *Washington Univ. School of Medicine, St. Louis, Mo.*

202. Cardiac output in the rat and its relationship to air embolism. F. R. BLOOD* AND F. E. D'AMOUR. *Univ. of Denver, Denver, Colo.*

203. Prototypal curves of dye concentration for cardiac output by injection method. PHILIP DOW AND W. F. HAMILTON. *Univ. of Georgia School of Medicine, Augusta.*

204. Comparison of cardiac output determined by the Fick procedure and a direct rotameter method. ROBERT D. SEELY,* WILLIAM E. NERLICH* AND DONALD E. GREGG. *Field Research Lab., Fort Knox, Ky.*

205. Effect of auricular fibrillation on cardiac output, coronary flow and arterial blood pressure. RÉNE WÉGRIA, CHARLES W. FRANK,* GEORGE A. MISRAHY,* ROBERT S. SIOUSSAT,* LEONARD SOMMER* AND GEORGE H. MCCORMACK, JR.* *Columbia Univ. College of Physicians and Surgeons and Presbyterian Hospital, New York City.*

206. Relation between size of the heart and stroke index. W. F. HAMILTON. *Univ. of Georgia School of Medicine, Augusta.*

207. Relation between stroke index and time of diastole in the intact dog. JOHN W. REMINGTON. *Univ. of Georgia School of Medicine, Augusta.*

THURSDAY, APRIL 20, 9:00 A.M.

General: Physical

ROOM 15

A. P. Gagge, *Chairman*

208. Physiological and pharmacodynamic studies of blood from x-ray personnel. DAVID I. MACHT AND STANLEY H. MACHT.* *Sinai Hospital and Baltimore City Hospitals, Baltimore, Md.*

209. Physical properties of bone. F. GAYNOR EVANS AND MILTON LEBOW (introduced by ERNEST GARDNER). *Wayne Univ., Detroit, Mich.*

210. Dielectric properties of tissues important in microwave diathermy. J. F. HERRICK, D. G. JELATIS* AND G. M. LEE.* *Mayo Fndn., Rochester, Minn.*

211. Mechanical impedance of the surface of the human body and its relation to elastic properties of skeletal muscle. ERNST K. FRANKE (introduced by H. M. SWEENEY). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

212. Absorption of vibratory energy by the human body surface. H. O. PARRACK, HENNING VON GIERKE,* HANS OSTREICHER* AND WOLF W. VON WITTERN.* *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

213. Glucose, *p*H and potassium retention in red cells. JAMES W. GREEN.* AND A. K. PARPART, *Princeton Univ., Princeton, N. J.*

214. Effect of temperature on uptake of radioactive phosphate by human erythrocytes. DESMOND R. H. GOURLEY* AND CHALMERS L. GEMMILL. *Univ. of Virginia Med. School, Charlottesville.* (Pharmacol.)

215. Factors influencing active ion uptake by isolated frog skin. ERNST G. HUF. *Med. College of Virginia, Richmond.*

216. Effect of temperature on P^{32} transport in fertile and infertile eggs. JEROME J. WOLKEN (introduced by M. A. LAUFFER). *Univ. of Pittsburgh, Pittsburgh, Pa.* (Biochem.)

217. Radiophosphorus in mosquitoes. C. C. HASSETT (introduced by W. H. CHAMBERS). *Army Chemical Center, Md.*

THURSDAY, APRIL 20, 9:00 A.M.

Nervous System: Electrical and Stimulation

ROOM 20

Amedeo S. Marrazzi, *Chairman*

218. Effects of electrical stimulation of temporal lobe in the rhesus monkey. P. D. WALL AND G. D. DAVIS (introduced by J. F. FULTON). *Yale Univ. School of Medicine, New Haven, Conn.*

219. Facilitating effect of local strychninization on pressor responses evoked from cerebral cortex. E. C. HOFF, H. G. LANGFORD,* J. W. VESTER,* W. W. BECKNER* AND P. R. THOMAS.* *Med. College of Virginia, Richmond.*

220. Positive pulse stimulation of anterior sigmoid and precentral gyri: electric current threshold dependence on anesthesia, pulse duration, and repetition frequency (cats and monkeys). WILLIAM W. CHAMBERS, GEOEGE M. AUSTIN AND JOHN C. LILLY (introduced by MARGARET SUMWALT MCCOUCH). *Univ. of Pennsylvania, Philadelphia.*

221. Axon as model of synapse: new evidence of similarity of conduction and transmission. THEODORE HOLMES BULLOCK. *Univ. of California, Los Angeles.*

222. Effect of section of corpus callosum on experimental convulsions. R. D. TEASDALL* AND G. W. STAVRAKY. *Univ. of Western Ontario, London, Canada.*

223. Diencephalic mechanisms for facilitation and inhibition. GEORGE AUSTIN* AND HERBERT JASPER. *McGill Univ. and Montreal Neurological Inst., Montreal, Que., Canada.*

224. Influence of cerebellar cortex on incoming cerebellar volleys. RAY S. SNIDER AND P. M. COOKE.* *Northwestern Univ. Med. School and Univ. of Illinois Med. School, Chicago, Ill.*

225. Origin of the cerebellar waves. JOHN M. BROOKHART, G. MORUZZI* AND R. S. SNIDER. *Northwestern Univ. Med. School, Chicago, Ill.*

226. Electro-icono-grams from the cerebral cortex (cats) at the pial surface: 'spontaneous' activity and responses to endorgan stimuli under anesthesia. JOHN C. LILLY AND WILLIAM W. CHAMBERS (introduced by H. C. BAZETT). *Univ. of Pennsylvania, Philadelphia.*

227. Spreading cortical depression. CARL F. ESSIG* AND WADE H. MARSHALL. *Natl. Insts. of Health, Bethesda, Md.*

228. Electrical mechanism of brain waves. HYMAN OLKEN (introduced by F. M. BERGER). *Navy Dept., Washington, D. C.* (Pharmacol.)

THURSDAY, APRIL 20, 9:00 A.M.

Endocrine: Adrenal, Stress

ROOM 21

Charles H. Best, *Chairman*

229. Adrenal cortex and survival of rats after x-irradiation. ABRAHAM EDELMANN. *Brookhaven Natl. Lab., Upton, N. Y.*

230. Endocrine effects of electroconvulsive shock in the rat. JAMES A. F. STEVENSON, SYLVAN J. KAPLAN AND H. ENGER ROSVOLD (introduced by JOHN S. NICHOLAS). *Yale Univ. School of Medicine, New Haven, Conn.*

231. Extraction and fractionation of urinary corticosteroids. GREGORY PINCUS AND LOUISE P. ROMANOFF.* *Worcester Fndn. for Exper. Biology, Shrewsbury, Mass., and Tufts College Med. School, Medford, Mass.*

232. Dose response data in man following orally administered or injected lipo-adrenal cortical extract. FRED ELMADJIAN (introduced by HUDSON HOAGLAND). *Worcester Fndn. for Exper. Biology, Shrewsbury, Mass.*

233. Influence of cortisone and related steroids on the spreading effect of hyaluronidase. CHARLES A. WINTER AND LARS FLATAKER.* *Merck Inst. for Therapeutic Research, Rahway, N. J.*

234. Effects of ACTH on synovial membrane potenials in rheumatoid arthritis. C. I. REED, NORMAN R. JOSEPH, IRVING E. STECK* AND N. M. MONTGOMERY.* *Univ. of Illinois, Chicago.*

235. Antagonism of adrenocorticotrophic hormone (ACTH) and adrenal cortical extract (ACE) to desoxycorticosterone (DCA): pathological changes. DIXON M. WOODBURY,* CHARLES A. ROSENBERG* AND GEORGE SAYERS. *Univ. of Utah and Veterans Hospital, Salt Lake City, Utah.*

236. Influence of pantothenic acid on response of adrenalectomized and intact rats to stress. MARY E. DUMM* AND ELAINE P. RALLI. *New York Univ. College of Medicine, New York City.*

237. Influence of diet composition on alarm reaction to acute stress. P. CONSTANTINIDES (introduced by H. SELYE). *Université de Montreal, Montreal, Que., Canada.*

238. Comparison of effects of a stress on glycosuria of force-fed partially depancreatized and of partially depancreatized-adrenalectomized rats. DWIGHT J. INGLE. *Upjohn Co., Kalamazoo, Mich.*

239. Maturation of pituitary-adrenal axis in newborn rats. JOSEPH W. JAILER. *Columbia Univ., College of Physicians and Surgeons, New York City.*

THURSDAY, APRIL 20, 9:00 A.M.

General: Metabolism, etc.

ROOM 22

J. H. Bodine, *Chairman*

240. Optimum frequencies for sonic disintegration of paramecia. EUGENE ACKERMAN (introduced by J. A. E. EYSTER). *Johnson Fndn., Univ. of Pennsylvania, Philadelphia.*

241. Structure of gels from ovalbumin and serum albumin. MARTIN P. JAGGI* AND DAVID F. WAUGH. *Massachusetts Inst. of Technology, Cambridge.*

242. Biological and photochemical action of ultraviolet radiation at low temperatures. F. HEINMETS AND W. W. TAYLOR. *Naval Med. Field Research Lab., Camp Lejeune, N. C.*

243. Development and loss of resistance to cell division blocking action of nitrogen mustards. JOHN O. HUTCHENS AND BETTY PODOLSKY.* *Univ. of Chicago, Chicago, Ill.*

244. Action of M.B., 2,4-DNP, NaN_3 and ethyl carbamate on oxygen uptake of mitotically active and blocked embryonic cells. JOSEPH HALL BODINE. *State Univ. of Iowa, Iowa City.*

245. Inhibition of luminescence by a homologous series of carbamates. FRANK H. JOHNSON, RICHARD SIMPSON,* ELIZABETH A. FLAGLER* AND KATHERINE MCGEER.* *Princeton Univ., Princeton, N. J.*

246. Transitory carbohydrate substance occurring in the anaerobic assimilation of yeast cells. J. PERCY BAUMBERGER AND FRANK W. FALES.* *Stanford Univ. Med. School, Stanford, Calif.*

247. Early divergence of pathways of aerobic and anaerobic glucose metabolism in yeast. A. ROTHSTEIN, L. HURWITZ* AND R. MEIER.* *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

248. Nature of influence of *p*H on hemolysis by sodium oleate. M. H. JACOBS AND CAROLYN STOUT.* *Univ. of Pennsylvania School of Medicine, Philadelphia.*

249. Osmotic behavior of isolated nuclei. LESTER GOLDSTEIN AND CLIFFORD V. HARDING (introduced by L. V. HEILBRUNN). *Univ. of Pennsylvania, Philadelphia.*

THURSDAY, APRIL 20, 1:30 P.M.

Circulation: Pulmonary

BALLROOM

Andre F. Cournand, *Chairman*

250. Pulmonary capillary pressure as index of left atrial mean pressure in dogs. JAMES W. DOW AND RICHARD GORLIN (introduced by GEORGE W. THORN). *Peter Bent Brigham Hospital and Harvard Med. School, Boston, Mass.*

251. Influence of diaphragm on portal blood flow and venous return. ROBERT S. ALEXANDER. *Western Reserve Univ. School of Medicine, Cleveland, Ohio.*

252. Comparison of hemodynamics in pulmonary and systemic circulations in various diseases. FLORENCE W. HAYNES AND LEWIS DEXTER.* *Peter Bent Brigham Hospital and Harvard Med. School, Boston, Mass.*

253. Influence of respiration on dynamics of experimental atrial septal defects. G. A. BRECHER AND D. F. OPDYKE. *Western Reserve Univ. Med. School, Cleveland, Ohio.*

254. Further proof of aspiratory effect of inspiration on right atrial inflow. DAVID F. OPDYKE AND WILLIAM H. VAN NOATE.* *Western Reserve Univ. Med. School, Cleveland, Ohio.*

255. Interrelationship of cardiac output, blood pressure and peripheral resistance during respiration. ARTHUR L. GROPPER AND ARNOLD H. WILLIAMS (introduced by JOHN R. SMITH). *Washington Univ. School of Medicine, St. Louis, Mo.*

256. Movements of dog's heart in the closed chest. H. W. RUDEL,* A. SOKALCHUK,* G. C. RING AND G. J. NAVIS.* *Temple Univ. Med. School, Philadelphia, Pa.*

257. Chemo- and presso-reflexes from perfused heart and lungs of dogs. DOMINGO M. AVIADO, JR., T. H. LI, W. KALOW, M. HESS AND G. TURNBULL (introduced by C. J. LAMBERTSEN). *Univ. of Pennsylvania, Philadelphia.* (Pharmacol.)

258. Cardiovascular pressor reflex mechanism under head-to-tail acceleration (negative G). SHELDON ROSENFELD AND CHARLES F. LOMBARD (introduced by CHESTER HYMAN). *Univ. of Southern California School of Medicine, Los Angeles.*

259. Experimental differential inflow obstruction in dogs' hearts. ROBERT J. BOUCEK,* JOHN H. GRINDLAY, *Mayo Clinic, Rochester, Minn.*

260. Influence of tetraethylammonium chloride on circulatory responses to valsalva maneuver. IVAN L. BUNNELL, DAVID G. GREENE AND WILLIAM W. KUNZ (introduced by FRED R. GRIFFITH, JR.). *Univ. of Buffalo School of Medicine and General Hospital, Buffalo, N. Y.*

THURSDAY, APRIL 20, 4:30 P. M.

Physiology Business Meeting

ROOM 20

THURSDAY, APRIL 20, 1:30 P.M.

Nervous System: Sense Organs, etc.

ROOM 15

Hallowell Davis, *Chairman*

261. Preparation and physical properties of crustacean sinus gland hormone. ELOISE KUNTZ (introduced by RUTH E. CONKLIN). *Brown Univ., Providence, R. I. and Vassar College, Poughkeepsie, N. Y.*

262. Central summation following contralateral stimulation of tarsal chemoreceptors. V. G. DETHIER (introduced by ARTHUR J. DZIEMIAN). *Johns Hopkins Univ., Baltimore, Md.*

263. Pigment layer factor in visual purple regeneration. ALFRED F. BLISS. *Tufts College Med. School, Boston, Mass.*

264. Effects of azide and ATP on retinal potentials. WERNER K. NOELL (introduced by HARRY F. ADLER). *USAF School of Aviation Medicine, Randolph Field, Texas.*

265. Muscle spindle excitation by efferent fibers in cat. CARLTON C. HUNT* AND STEPHEN W. KUFFLER. *Johns Hopkins Med. School, Baltimore, Md.*

266. Effect of temperature-change on round window response in the hamster and bat. WALTER A. ROSENBLITH,* LAWRENCE KAHANA* AND ROBERT GALAMBOS. *Harvard Univ., Boston.*

267. Auditory action potentials in response to clicks. H. DAVIS, C. FERNÁNDEZ* AND D. R. MCAULIFFE.* *Central Inst. for the Deaf, St. Louis, Mo.*

268. Responses of the ear to high-frequency sound. DONALD H. ELDREDGE, JR. (introduced by E. A. PINSON). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

269. Interruption of bulbocapnine catalepsy in rats by environmental stress. HENRY N. WAGNER, JR. AND JAMES W. WOODS (introduced by CURT P. RICHTER). *Johns Hopkins Univ. School of Medicine, Baltimore, Md.*

270. Localization of frontal oculomoter cortex in the cat. ROBERT B. LIVINGSTON. *Institut de Physiologie, École de Médecine, Geneva, Switzerland.*

THURSDAY, APRIL 20, 4:30 P. M.

Physiology Business Meeting

ROOM 20

THURSDAY, APRIL 20, 1:30 P.M.

Nervous System: Autonomic, etc.

ROOM 20

Theodore Koppanyi, *Chairman*

271. Functional analysis of vasomotor innervation of the dog's footpad. W. C. RANDALL, W. F. ALEXANDER,* J. W. COX* AND A. B. HERTZMAN. *St. Louis Univ. School of Medicine, St. Louis, Mo.*

272. Descriptive analysis of vasomotor responses in the footpad of the dog. F. E. FRANKE, W. C. RANDALL, J. W. COX,* W. F. ALEXANDER* AND A. B. HERTZMAN. *St. Louis Univ. School of Medicine, St. Louis, Mo.*

273. Action of curare. JAY A. SMITH, MELVIN POST AND SHERWIN ZALMAN (introduced by L. B. NICE). *Chicago Med. School, Chicago, Ill.*

274. Immediate increase in adrenaline 'sensitivity' of the sympathectomized nictating membrane of the cat following SC-1950. GEORGE W. MEYER* AND KEITH S. GRIMSON. *Duke Univ. School of Medicine, Durham, N. C.*

275. Pancreatic secretions and response to secretin after vagotomy and sympathectomy. WILLIAM W. SHINGLETON, BLAKE FAWCETT AND J. STANLEY VETTER (introduced by K. S. GRIMSON). *Duke Univ. School of Medicine, Durham, N. C.* (Pharmacol.)

276. Cholinergic sensitivity in an afferent cerebral system. AMEDEO S. MARRAZZI AND E. ROSS HART.* *Army Chemical Center, Md.*

277. Hypothalamic control of secretion of adrenocorticotropic hormone. GEOFFREY W. HARRIS AND J. DE GROOT (introduced by ROBERT S. MORISON). *Physiological Lab., Cambridge, England.*

278. Effect of neuro- and adenohypophysectomy on water metabolism and on hypothalamic nuclei in the rat. THOMAS H. MAREN AND DAVID BODIAN (introduced by E. K. MARSHALL, JR.). *Johns Hopkins Univ., Baltimore.*

279. Semi-automatic recording of electrical skin resistance patterns. PRICE E. THOMAS* AND IRVIN M. KORR. *Kirksville College of Osteopathy and Surgery, Kirksville, Mo.*

280. Reaction to pain as determined by galvanic skin response. JAMES D. HARDY AND MANUEL FURER.* *Cornell Univ. Med. College, New York.*

281. Evidence for adrenergic sweating in man. HENRY HAIMOVICI (introduced by H. B. VAN DYKE). *Montefiore Hospital, New York City.*

THURSDAY, APRIL 20, 1:30 P.M.

Endocrine: Pituitary, Gonads

ROOM 21

Evelyn Anderson, *Chairman*

282. Estrogen content of blood of ovarian vein of the dog and spermatic vein of the stallion. A. E. RAKOFF* AND A. CANTAROW. *Jefferson Med. College, Philadelphia, Pa.*

283. Relation of biological activity of progesterone to the extent of its conversion to pregnanediol. H. S. GUTERMAN. *Michael Reese Hospital, Chicago, Ill.*

284. Relative effectiveness of natural estrogens in stimulating early uterine growth. CLARA M. SZEGO. *Univ. of California, Los Angeles.*

285. Effects of purified hypophysial gonadotropins on cholesterol ester content of rat testis. JAY TEPPERMAN, HELEN M. TEPPERMAN* AND JANET M. DEWITT.* *Syracuse Univ. College of Medicine, Syracuse, N. Y.*

286. Effects of pituitary growth hormone in normal and depancreatized cats. A. E. MILMAN AND P. DE MOOR (introduced by F. D. W. LUKENS). *Univ. of Pennsylvania, Philadelphia.*

287. Effects of growth hormone on insulin hypersensitivity and glucose tolerance of hypophysectomized dogs. R. C. DE BODO, M. KURTZ,* A. ANCOWITZ* AND S. P. KIANG.* *New York Univ. College of Medicine, New York City.*

288. Effect of purified growth hormone on glycogen content of the tissues of the rat. BARBARA A. ILLINGWORTH* AND JANE A. RUSSELL. *Yale Univ., New Haven, Conn.*

289. Inactivation of gonadotrophins by liver and liver homogenates. B. VINCENT HALL (introduced by AUSTIN M. BRUES). *Univ. of Illinois, Urbana, and Argonne Natl. Lab., Chicago, Ill.*

290. Observations on in vivo inactivation of testosterone propionate by liver of the white rat. JOHN T. GRAYHACK* AND W. W. SCOTT. *Johns Hopkins Hospital, Baltimore Md.*

291. Inactivation of posterior pituitary antidiuretic hormone by liver extracts. JAMES H. BIRNIE (introduced by ROBERT GAUNT). *Syracuse Univ., Syracuse, N. Y.*

THURSDAY, APRIL 20, 4:30 P.M.

Physiology Business Meeting

ROOM 20

THURSDAY, APRIL 20, 1:30 P.M.

Gastro-Intestinal: Secretion I

ROOM 22

J. P. Quigley, *Chairman*

292. Effect of intraluminal hydrostatic pressure on water and sodium movement across intestinal wall of dogs. S. T. COLEMAN, R. F. JONES AND M. J. FOGELMAN (introduced by ROBERT W. LACKEY). *Southwestern Med. School of Univ. of Texas, Dallas.*

293. Critical study of the Shay rat. ROBERT J. MADDEN AND HELEN M. RAMSBURG (introduced by M. O. LEE). *Natl. Inst. of Health, Bethesda, Md.*

294. Directional effect of electric current on secretion of chloride ions by the dog's stomach. WARREN S. REHM. *Univ. of Louisville, Louisville, Ky.*

295. Acid secretion and cytological structure of mouse stomachs incubated in vitro. HORACE W. DAVENPORT, GOTTLIEB L. SCHNEEBELI* AND VIRGINIA J. CHAVRÉ.* *Univ. of Utah College of Medicine, Salt Lake City.*

296. Bicarbonate concentration of pancreatic juice during experimental acidosis. S. S. CONLY,* J. O. CRIDER AND J. E. THOMAS. *Jefferson Med. College, Philadelphia, Pa.*

297. Urolipase in normal and depancreatized dogs. H. C. MENG (introduced by CHARLES E. KING). *Vanderbilt Univ. Med. School, Nashville, Tenn.*

298. Volume and enzyme response of transplanted pancreas to foodstuffs in the intestine. C. C. WANG* AND M. I. GROSSMAN. *Univ. of Illinois College of Medicine, Chicago.*

299. Thyroid regulation of gastric function. R. N. WATMAN* AND E. S. NASSET. *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

300. Ascorbic acid levels in gastric secretion, blood, urine and saliva. JOSEPH T. FREEMAN* AND ROBERTA HAFKESBRING. *Woman's Med. College of Pennsylvania, Philadelphia.*

301. Plasma and erythrocytic ion concentrations in infant diarrhea. J. N. ETTELDORF* AND R. R. OVERMAN. *Univ. of Tennessee College of Medicine, Memphis.*

THURSDAY, APRIL 20, 4:30 P.M.

Physiology Business Meeting

ROOM 20

FRIDAY, APRIL 21, 9:00 A.M.

Respiration

ROOM F

J. H. Comroe, *Chairman*

302. Polarometric method for oxygen tension in blood with a rotating platinum electrode. EDWARD H. MORGAN AND GABRIEL G. NAHAS (introduced by HOWARD B. BURCHELL). *Mayo Fndn., Rochester, Minn.*

303. Continuous-indicating recording oxygen cathode. GEOGE H. MANGUN AND WALTER D. GRIEST.* *Henry Ford Hospital, Detroit, Mich.* (Biochem.)

304. Contribution to oximeter design using modulated light. W. PAUL (introduced by J. K. W. FERGUSON). *Univ. of Toronto, Toronto, Canada.*

305. Comparison of arterial O_2 saturation with tissue O_2 levels. VIVIAN G. BEHRMANN, WALTER D. GRIEST,* GEORGE H. MANGUN* AND FRANK W. HARTMAN.* *Henry Ford Hospital, Detroit, Mich.*

306. Influence of pulmonary proprioceptive reflexes during electrophrenic respiration. PAUL O. CHATFIELD* AND STANLEY J. SARNOFF. *Harvard Med. School and Harvard School of Public Health, Boston, Mass.*

307. Role of the vagus in control of respiration. EMIL BOZLER AND B. H. BURCH.* *Ohio State Univ., Columbus.*

308. Quantitative method for measuring pulmonary edema in extirpated lungs of guinea pigs. ALLAN HEMINGWAY. *Univ. of Minnesota, Minneapolis.*

309. Evaluation of pulmonary edema at autopsy. STANLEY H. DURLACHER, WILLIAM G. BANFIELD* AND A. DOROTHY BERGNER.* *Army Chemical Center, Md.*

310. Hyperpnea of bronchial obstruction and stelectasis. HARBEN J. BOUTOURLINE-YOUNG* AND JAMES L. WHITTENBERGER. *Harvard School of Public Health, Boston, Mass.*

311. Measurement of ventilatory dead space in subjects with uneven pulmonary ventilation. WARD S. FOWLER (introduced by J. H. COMROE, JR.). *Univ. of Pennsylvania, Graduate School of Medicine, Philadelphia.*

312. Technique for sampling of respiratory gases in non-cooperative subjects. C. A. FORSSANDER (introduced by C. WHITE). *Univ. of Pennsylvania School of Medicine, Philadelphia.*

FRIDAY, APRIL 21, 9:00 A.M.

Circulation: Blood, etc.

BALLROOM

Frank W. Mann, *Chairman*

313. Changes in hemoglobin during metamorphosis in the bullfrog (*Rana catesbiana*). AUSTEN F. RIGGS, II (introduced by GEORGE WALD). *Harvard Univ., Cambridge, Mass.*

314. Influence of carotid body removal on polycythemic response to biscontinuous anoxia.

WILSON C. GRANT. *Columbia Univ. College of Physicians and Surgeons, New York City.*

315. Absolute numbers of circulating eosinophil blood cells in dogs fasted for three days. F. HALBERG,* J. R. R. BOBB AND M. B. VISSCHER. *Univ. of Minnesota, Minneapolis.*

316. Metabolism of leukemic cells in vitro. ROBERT M. BIRD, JOHN A. CLEMENTS AND LILLIAN M. BECKER (introduced by F. GUDERNATSCH). *Cornell Univ. Med. College, New York City.*

317. Complete individuality of canine blood as source of an urticaria-producing factor. ANGIE S. HAMILTON AND BERT MORROW (introduced by J. E. RHOADS). *Univ. of Pennsylvania School of Medicine, Philadelphia.*

318. Physiologic responses of certain animals and isolated preparations to mixtures of snake venoms and egg yolk. MURRAY DWORETZKY AND P. BOQUET (introduced by F. C. MANN). *Mayo Fndn., Rochester, Minn., and Pasteur Inst., Paris, France.*

319. Measurement of hepatic circulation by clearance of radioactive sodium in man. RICHARD L. WECHSLER,* LOUIS SOKOLOFF* AND SEYMOUR S. KETY. *Univ. of Pennsylvania Graduate School of Medicine and Philadelphia General Hospital, Pa.*

320. Effect of physical factors on radiosodium clearance in dogs. FREDERICK R. FRANKE,* JOSEPH B. BOATMAN,* ROBERT S. GEORGE* AND CAMPBELL MOSES. *Univ. of Pittsburgh School of Medicine, Pittsburgh, Pa.*

321. In vitro and apparent in vivo solubility of acetylene. HENRY LONGSTREET TAYLOR AND CARLETON B. CHAPMAN.* *Univ. of Minnesota, Minneapolis.*

322. Epinephrine effect on portal circulation. ELMER B. PRATT AND FRANCIS D. BURDICK (introduced by RICHARD WHITEHEAD). *Univ. of Colorado, Denver.*

FRIDAY, APRIL 21, 9:00 A.M.

Nervous System: Chemical

ROOM 20

Harold E. Himwich, *Chairman*

323. Polarographic analysis of spinal fluid as an aid in diagnosis of poliomyelitis. OTTO H. MÜLLER. *Syracuse Univ. College of Medicine, Syracuse, N. Y.*

324. Food deprivation on sexual reflexes. W. HORSLEY GANTT. *Johns Hopkins Univ., Baltimore, Md.*

325. Effect of theophylline, theophylline ethylenediamine and 8-chlorotheophylline on electrocorticogram of rabbits. R. J. JOHNS* AND H. E. HIMWICH. *Army Chemical Center, Md.*

326. Do anesthetics depress nerve cells by depressing oxygen consumption? MARTIN G. LARRABEE, JUAN GARCIA RAMOS* AND EDITH BULBRING.* *Johns Hopkins Univ., Baltimore, Md.*

327. Respiration of cerebral cortex in vivo, in absence of glucose. R. G. GRENELL AND P. W. DAVIES. *Univ. of Maryland and Johns Hopkins Univ., Baltimore, Md.*

328. Effect of high potassium on respiration and demarcation potential of a small locally-perfused area of cerebral cortex. P. W. DAVIES AND R. G. GRENELL. *Johns Hopkins Univ. and Univ. of Maryland, Baltimore, Md.*

329. Cerebral metabolism in hyperthyroidism and myxedema. PERITZ SCHEINBERG (introduced by EUGENE A. STEAD, JR.). *Duke Univ. School of Medicine, Durham, N. C.*

330. Mode of action of dinitrophenol on O_2 uptake of excised rat brain. DAVID B. TYLER. *Carnegie Inst. of Washington, Baltimore, Md.*

331. Quantitative histochemical distribution of enzymes in cyto-architectural layers of cerebral cortex. ALFRED POPE, JAMES R. WARE AND RUBY H. THOMSON (introduced by J. FOLCH). *McLean Hospital, Waverley, Mass. and Harvard Med. School, Boston, Mass.* (Biochem.)

332. Cerebral blood flow and oxygen metabolism following head-up tilt in hypertensive patients after sympathectomy. CHARLES W. CRUMPTON, JOHN H. MOYER, HERBERT WENDEL, HENRY A. SHENKIN, WILLIAM A. JEFFERS AND JOSEPH H. HAFKENSCHIEL (introduced by H. S. WIGODSKY). *Univ. of Pennsylvania Med. School, Philadelphia.*

333. Oxygen in carotid blood and oxygen utilization of brain in pre- and post-mature fetal rabbits. I. MAUREEN YOUNG (introduced by DONALD H. BARRON). *Yale Univ. School of Medicine, New Haven, Conn., and Sherrington School of Physiology, St. Thomas's Hospital, London, England.*

FRIDAY, APRIL 21, 9:00 A.M.

Endocrine: Adrenal, etc.

ROOM 21

H. S. Mayerson, *Chairman*

334. Relatively light doses of sesame oil on oxygen consumption and the role of adrenal cortex. THOMAS B. CALHOON* AND CLIFFORD A. ANGERER. *Ohio State Univ., Columbus.*

335. Secretion of gluconeogenic factor by adrenal. KATHARINE A. BROWNELL. *Ohio State Univ., Columbus.*

336. Secretion of fat factor of adrenal. FRANK A. HARTMAN AND T. Y. LIU.* *Ohio State Univ., Columbus.*

337. Adrenal gland and hemopoiesis in the rat. ALBERT S. GORDON AND SAM J. PILIERO.* *Washington Square College of Arts and Science, New York Univ., New York City.*

338. Ketosteroid and ascorbic acid cytochemistry observed in adrenal cortices of rats. HABEEB BACCHUS (introduced by E. C. ALBRITTON). *George Washington Univ. School of Medicine, Washington, D. C.*

339. Adrenal stress and metabolism of ascorbic acid. WALTER M. BOOKER, RAYMOND L. HAYES* AND FRANCES M. DENT.* *Howard Univ. Colleges of Medicine and Dentistry, Washington, D. C.*

340. Metabolic response of epileptic patients to adrenaline. A. DURY, J. W. HOLLER* AND C. SMITH.* *Bradford Hospital, Bradford, Pa., and Univ. of Rochester School of Medicine, Rochester, N. Y.*

341. Adrenalectomy and proteinuria in the rat. T. ADDIS,[1] J. MARMORSTON,* H. GOODMAN* AND A. SELLERS.* *Cedars of Lebanon Hospital, Los Angeles, Calif.*

342. Pyrogen fever in rabbits: effects of adrenalectomy and thyroidectomy. RONALD GRANT, J. DOROTHY HIRSCH AND BARBARA B. HIRSCH (introduced by FRANK W. WEYMOUTH). *Stanford Univ., Stanford, Calif.*

343. Changes in endocrine organs induced by bacterial pyrogens. W. F. WINDLE, H. H. WILCOX,* RUTH RHINES* AND C. CLEMENTE.* *Univ. of Pennsylvania School of Medicine, Philadelphia.*

344. Carbohydrates in human cervical mucus. MARY ALICE B. BRECKENRIDGE* AND W. T. POMMERENKE. *Univ. of Rochester Med. School, Rochester, N. Y.*

FRIDAY, APRIL 21, 9:00 A.M.

Gastro-Intestinal: Secretion II

ROOM 22

A. J. Carlson, *Chairman*

345. Relation of urinary pepsinogen excretion to gastric secretory activity in man. HENRY D. JANOWITZ* AND FRANKLIN HOLLANDER. *Mt. Sinai Hospital, New York City.*

346. Proteolytic systems in plasma active at acid reactions. I. ARTHUR MIRSKY, PERRY FUTTERMAN* AND ROBERT H. BROH-KAHN. *Jewish Hospital, Cincinnati, Ohio.*

347. Protein fractions of gastric juice obtained by electrophoretic separation. ALLAN L. GROSSBERG,* S. A. KOMAROV AND HARRY SHAY. *Temple Univ. School of Medicine, Philadelphia, Pa.*

348. Protein content and tryptic activity determined by several methods in canine pancreatic juice under different conditions of stimulation. S. A. KOMAROV, HERMAN SIPLET* AND HARRY SHAY. *Temple Univ. School of Medicine, Philadelphia, Pa.*

349. Potentiation of gastric secretory response to other stimuli by caffeine. JAMES L. A. ROTH (introduced by JULIUS H. COMROE). *Univ. of Pennsylvania Graduate School of Medicine and School of Medicine, Philadelphia.*

350. Relation of constituents of gastric juice to occurrence of mucosal erosion and bleeding. STEWART WOLF AND GEORGE B. JERZY GLASS.* *New York Hospital and Cornell Univ. Med. College, New York City.*

351. Gastric secretory inhibitor factor in canine gastric juice. GEORGE R. LIVERMORE, JR.* AND CHARLES F. CODE. *Mayo Clinic and Mayo Fndn., Rochester, Minn.*

352. Serial determinations of morning gastric secretion in patients with peptic ulcer. A. LITTMAN,* C. E. ROSIERE* AND A. C. IVY. *Univ. of Illinois College of Medicine, Chicago.*

353. Absence of anti-ulcer factor from urine of patients with duodenal ulcer. M. H. F. FRIEDMAN. *Jefferson Med. College, Philadelphia, Pa.*

354. Anti-ulcer action of estrogen in experimental animals. FRANK E. VISSCHER AND ADRIAN P. TAZELAAR.* *Upjohn Co., Kalamazoo, Mich.*

FRIDAY, APRIL 21, 1:30 P.M.

Aviation and Stress

ROOM F

Edward J. Van Liere, *Chairman*

355. Studies on effect of anoxic anoxia on goat blood sugar. J. CLIFFORD STICKNEY, DAVID W. NORTHUP AND EDWARD J. VAN LIERE. *West Virginia Univ. School of Medicine, Morgantown.*

356. Effects of altitude on size, activity and composition of gases of the colon of dogs. F. R. STEGGERDA AND T. C. BUNTING.* *Univ. of Illinois, Urbana.*

357. Changes in metabolism in acclimatization of albino rats to reduced barometric pressure. JEROME L. LIPIN* AND WILLIAM V. WHITEHORN. *Univ. of Illinois College of Medicine, Chicago.*

358. Effect of daily exposures to 18,000 feet simulated altitude on life cycle of the rat. PAUL

[1] Deceased

D. ALTLAND AND BENJAMIN HIGHMAN (introduced by HEINZ SPECHT). *Natl. Insts. of Health, Bethesda, Md.*

359. Effect of carbon dioxide on rate of denitrogenation in human subjects. JULIUS SENDROY, JR. AND RODOLFO MARGARIA.* *Naval Med. Research Inst., Bethesda, Md.* (Biochem.)

360. Time of consciousness at high altitudes. J. W. WILSON AND ELIZABETH COMFORT.* *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

361. Human tolerance and responses to high positive pressure breathing. CLARENCE C. CAIN, JOHN A. WOOD AND DAVID I. MAHONEY (introduced by J. W. HEIM). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

362. Etiology of explosive decompression injury. E. L. COREY AND E. G. LEWIS.* *Univ. of Virginia Med. School, Charlottesville.*

363. Pattern of gas expulsion from human lungs during rapid decompression. F. G. HALL. *Duke Univ. School of Medicine, Durham, N. C.*

364. Energy cost of flying multi-engined aircraft. FRED A. HITCHCOCK. *Civil Aeronautics Administration, Aeronautical Center, Oklahoma City, Okla.*

365. Effects of warming, cooling, and exercising the feet during prolonged radial acceleration. LAURENCE E. MOREHOUSE, RICHARD E. HUGHES,* ELIZABETH M. PRANGE* AND JANET WESSEL.* *Univ. of Southern California, Los Angeles.*

FRIDAY, APRIL 21, 1:30 P.M.

Circulation: Chemistry and Drugs

BALLROOM

Gordon C. Ring, *Chairman*

366. Effects of shear bacterial polysaccharides upon cardio-vascular response. CHESTER E. LEESE, WILLIAM E. POEL* AND HAROLD BERMAN.* *George Washington Univ. School of Medicine, Washington, D. C.*

367. Non-chronotropic T-wave changes produced by acetylcholine. IRVING M. LIEBOW AND HERMAN K. HELLERSTEIN (introduced by VICTOR LORBER). *Western Reserve Univ. School of Medicine, Univ. Hospitals of Cleveland, Cleveland, Ohio.*

368. Ventricular fibrillation in delayed treatment of TEPP poisoning. J. H. WILLS, B. P. MCNAMARA* AND E. A. FINE.* *Army Chemical Center, Md.*

369. Blood levels of cyclopropane and ether in relation to epinephrine-induced cardiac arrhythmias. M. J. OPPENHEIMER, E. M. GREISHEIMER, DOROTHY ELLIS AND SHIRLEY FRIDAY. *Temple Univ. School of Medicine, Philadelphia, Pa.*

370. Substitutes for procaine in ventricular tachycardia. E. L. MCCAWLEY, J. E. STANWOOD* AND N. A. DAVID. *Univ. of Oregon Med. School, Portland.*

371. Myocardial glucose, lactate and pyruvate metabolism of normal and failing hearts studied by coronary venous catheterization in man. WALTER T. GOODALE, ROBERT E. OLSON* AND DONALD B. HACKEL.* *Peter Bent Brigham Hospital, Harvard Med. School and Harvard School of Public Health, Boston, Mass.*

372. Regional distribution of blood flow after hemorrhage with and without Dibenamine. RAYMOND W. PICKERING (introduced by LANE H. ALLEN). *Univ. of Georgia School of Medicine, Augusta.*

373. Responses of blood vessels of the bat's wing to epinephrine and nor-epinephrine. PAUL A. NICOLL. *Harvard Med. School, Boston, Mass., and Indiana Univ., Bloomington.*

374. Nutritional and metabolic factors in peripheral vasomotor reactions: vasocompensatory impairment induced by avitaminosis C. RICHARD E. LEE (introduced by B. W. ZWEIFACH). *Cornell Univ. Med. College and New York Hospital, New York City.*

375. Effects of alterations of *pH* of blood on dynamics of circulation. KURT LANGE, FRANK GRAIG, DAVID WEINER AND VICTOR TCHERTKOFF (introduced by M. G. MULINOS). *New York Med. College, New York City.* (Pharmacol.).

376. Effects of Dicumarol on peripheral circulation in patients with vascular disease. KHALIL G. WAKIM, MARTIN S. KLECKNER, JR.,* NELSON W. BARKER* AND WALTER F. KVALE* (with the technical assistance of ADRIEN N. PORTER).* *Mayo Clinic, Rochester, Minn.*

FRIDAY, APRIL 21, 1:30 P.M.

Nervous System: Brain Stem

ROOM 20

Robert Gesell, *Chairman*

377. Blood vessels of nerves, as seen in living animals with quartz red illumination, and response to drugs including cortisone. JOSEPH T. ROBERTS, H. R. MURDOCK, JR.*, J. L. CAMPO,* C. J. TANNER* AND J. A. PAPARELLA.* *Veterans Administration Hospital, Batavia, N. Y., and Univ. of Buffalo School of Medicine, Buffalo, N. Y.*

378. Effect of ultrasound on nervous tissues. W. J. Fry and V. J. Wulff. *Univ. of Illinois, Chicago.*

379. Functional regeneration after nerve root transplantation in guinea baboon. L. W. Freeman, J. C. Finneran* and L. R. Radigan.* *Indiana Univ. School of Medicine, Indianapolis, and Yale Univ. School of Medicine, New Haven, Conn.*

380. Positivity in ventral horn during bulbar reticular inhibition of motoneurons. Jerome Y. Lettvin and Paul C. Dell (introduced by Warren S. McCulloch). *Manteno State Hospital and Univ. of Illinois College of Medicine, Chicago.*

381. Establishment and relief of asphyxial blocks in spinal motoneurons. David P. C. Lloyd. *Rockefeller Inst. for Med. Research, New York City.*

382. Changes of electrical potential of ventral roots of the spinal frog resulting from reflex stimulation. Lloyd D. Partridge* and Robert Gesell. *Univ. of Michigan, Ann Arbor.*

383. Effect of spinal cord lesions on positive and negative conditioned reflexes in dogs. William F. Allen. *Univ. of Oregon Med. School, Portland.*

384. Location of receptors for tonic neck reflexes. G. P. McCouch, T. H. Ling,* I. D. Deering* and D. Scott, Jr.* *Univ. of Pennsylvania School of Medicine, Philadelphia.*

385. Some functional connections between the hypothalamus and medulla. W. C. Thompson* and L. M. N. Bach. *Tulane Univ. School of Medicine, New Orleans, La.*

386. Decerebrate rigidity produced by discrete lesions. Marie J. Mayo (introduced by W. S. Wilde). *Tulane Univ. School of Medicine, New Orleans, La.*

Friday, April 21, 1:30 p.m.

Temperature

room 21

H. S. Belding, *Chairman*

387. Mechanism of magnesium hypothermia in the rabbit. V. E. Hall and F. A. Ellis.* *Stanford Univ. School of Medicine, Stanford, Calif.*

388. Relation between heat balance and physiological strain in walking men clad in a ventilated impermeable envelope. F. N. Craig. *Army Chemical Center, Md.*

389. Regional heat loss by temperature gradient calorimetry. A. C. Young,* L. D. Carlson and H. L. Burns.* *Univ. of Washington School of Medicine, Seattle.*

390. Effect of increased temperatures on constituents in the blood of the turtle. Charles G. Wilber and Joseph F. Schanno.* *St. Louis Univ. and Stonehill College, St. Louis, Mo.*

391. New methods of direct calorimetry and dermal radiometry. T. Benzinger and C. Kitzinger (introduced by Eugene F. DuBois). *Naval Med. Research Inst., Bethesda, Md.*

392. New type of gradient calorimeter for rapid, simultaneous determination of heat loss and heat production in laboratory animals. Lawrence R. Prouty and Richard W. Lawton (introduced by McKeen Cattell). *Cornell Univ. Med. College, New York City.*

393. Simultaneous partitional calorimetry and estimation of blood flows in the main skin regions of the body. Alrick B. Hertzman and Walter C. Randall. *St. Louis Univ. School of Medicine, St. Louis, Mo.*

394. Blood flow distribution in the heated dog. H. E. Ederstrom. *St. Louis Univ. School of Medicine, St. Louis, Mo.*

395. Oxygen partial pressures during hypothermia in the dog. K. E. Penrod. *Boston Univ. School of Medicine, Boston, Mass.*

396. Flight response of drosophila to variations in temperature. L. E. Chadwick. *Army Chemical Center, Md.*

Papers Read By Title

397. Sex difference in proteinuria of normal rats. T. Addis[1], J. Marmorston,* H. Goodman* and A. Sellers. *Cedars of Lebanon Hospital, Los Angeles, Calif.*

398. Ascorbic acid and ketosteroid cytochemistry in the rat's adrenal cortex following prolonged injections of epinephrine. Habeeb Bacchus (introduced by C. E. Leese). *George Washington Univ. School of Medicine, Washington, D. C.*

399. Electrolytes in the muscle of young chicks. J. S. Barlow* and J. F. Manery. *Univ. of Toronto, Toronto, Canada.*

400. Dual effect of positive intrapulmonic pressure on muscular response. John W. Bean and Leonard E. Elwell.* *Univ. of Michigan, Ann Arbor.*

401. Simultaneous high- and low-speed electromyography. A. L. Bennett and A. L. Dunn.* *Univ. of Nebraska College of Medicine, Lincoln.*

402. Free energy efficiency of assimilation of acetate and ethanol by *Chilomonas* paramecium. J. J. Blum* and John O. Hutchens. *Univ. of Chicago, Chicago, Ill.*

403. Influence of phlorhizin on intestinal absorption of hexoses. E. M. Bogdanove* and S. B. Barker. *State Univ. of Iowa, Iowa City.*

[1] Deceased.

404. Influence of adreno-cortical hormone on day to day blood levels and excretion of ascorbic acid in dogs. WALTER M. BOOKER, RAYMOND L. HAYES* AND FRANCES M. DENT.* *Howard Univ. Colleges of Medicine and Dentistry, Washington, D. C.*

405. Adrenal function in gravitational and acceleratory shock. S. W. BRITTON AND C. R. FRENCH.* *Univ. of Virginia, Charlottesville.*

406. X-ray observations on dogs following explosive decompression to 30 mm. Hg. BUFORD H. BURCH* AND FRED A. HITCHCOCK. *Ohio State Univ., Columbus.*

407. Experimental analysis of electrical responses of inferior colliculus to sound and cutaneous sensibilities. BERRY CAMPBELL. *Univ. of Minnesota Med. School, Minneapolis.*

408. Some effects of oxine, carbostyril and quinoline on isolated, living bullfrog nerves. FREDERICK CRESCITELLI. *Univ. of California, Los Angeles.*

409. Electrolyte and water excretion in the hypophysectomized dog. R. C. DE BODO, D. P. EARLE, JR., I. L. SCHWARTZ,* S. J. FARBER* AND E. D. PELLEGRINO.* *New York Univ. College of Medicine, New York City.*

410. Distribution of muscle fibers in a single motor unit. J. S. DENSLOW AND OLWEN R. GUTENSOHN.* *Kirksville College of Osetopathy and Surgery, Kirksville, Mo.*

411. Adrenal cortex and water metabolism in the golden hamster. ROBERT L. DORSEY AND W. R. BOSS (introduced by ROBERT GAUNT). *Syracuse Univ., Syracuse, N. Y.*

412. Effect of ACh on simultaneously recorded E.C.G. and cardiogram of the heart of *Venus mercenaria*. FENWORTH DOWNING,* A. L. DUNN* AND A. R. MCINTYRE. *Univ. of Nebraska College of Medicine, Lincoln.*

413. Peptidase activity of paraffin-embedded tissue. W. L. DOYLE, *Univ. of Chicago, Chicago, Ill.*

414. Increased fragility of erythrocytes during experimental hypertension. M. M. ELLIS, M. D. ELLIS* AND G. C. RAU* *Univ. of Missouri Med. School, Columbia.*

415. Propagation of surface waves over the human body. ERNST K. FRANKE, HANS OESTREICHER AND WOLF W. VON WITTERN (introduced by H. M. SWEENEY). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

416. Chemical changes occurring during symphyseal relaxation. EDWARD H. FRIEDEN* AND F. L. HISAW. *Harvard Univ., Cambridge, Mass.*

417. A characteristic response of the isolated frog skin potential to neurohypophyseal principles and its relation to the transport of sodium and water. FREDERICK A. FUHRMAN AND HANS H. USSING.* *Univ. of Copenhagen, Denmark, and Stanford Univ. School of Medicine, Stanford, Calif.*

418. Synergism of thromboplastin extracts from brain and lung. CLIFFORD F. GERBER* AND ERNEST W. BLANCHARD. *Schieffelin and Co., New York City.*

419. Effect of clothing on physiological adjustments of human beings to sudden change in environment. N. GLICKMAN, T. INOUYE,* R. W. KEETON, S. E. TELSER* AND M. K. FAHNESTOCK.* *Univ. of Illinois College of Medicine, Chicago, and Univ. of Illinois, Urbana.*

420. Constancy of responses to intra-arterial injections of mecholyl in the isolated blood perfused extremity: source and influence of constrictor substances produced by the blood donor animal. HAROLD D. GREEN, J. MAXWELL LITTLE, LEWIS T. FRANKLIN* AND HOWARD H. WAYNE.* *Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.*

421. Comparative toxicity of chloral hydrate and chloral alcoholate. PHILLIP V. HAMMOND,* DONALD E. STULLKEN* AND WILLIAM A. HIESTAND. *Purdue Univ., Lafayette, Ind.*

422. Suppression of ventricular ectopic impulses accompanying acute myocardial infarction by diphenylhydantoin sodium and barbiturates. A. SIDNEY HARRIS AND ROBERT H. KOKERNOT.* *Baylor Univ. College of Medicine, Houston, Texas.*

423. Vacuum spark discharge with liquid-jet electrode as a radiation energy source for photochemical reactions and biological inactivations. F. HEINMETS AND W. W. TAYLOR. *Naval Med. Field Research Lab., Camp Lejeune, N. C.*

424. Metabolic response to adrenaline of pre- and post-operated patients. J. W. HOLLER,* A. DURY, R. BURTON,* E. H. KEUTMANN* AND C. SMITH.* *Bradford Hospital, Bradford, Pa., and Univ. of Rochester School of Medicine, Rochester, N. Y.*

425. Induction of convulsions in rats. STEVEN M. HORVATH AND G. M. AUSTIN.* *Univ. of Pennsylvania, Philadelphia, and State Univ. of Iowa, Iowa City.*

426. A carbonyl reaction differentiating the fetal zona reticularis of the human adrenal cortex from the mouse X zone. EVELYN HOWARD AND R. S. BENUA.* *Johns Hopkins Univ. School of Medicine, Baltimore, Md.*

427. Effect of desoxycorticosterone and pitressin on the water balance of amphibia. KUANG-MEI HSIEH (introduced by ROBERT GAUNT). *Syracuse Univ., Syracuse, N. Y.*

428. Effect of sustained elevation of renal venous pressure on sodium excretion in the unanesthetized dog. W. HWANG,* L. AKMAN,* A.

MILLER,* E. SILBER,* J. STAMLER* AND L. N. KATZ. *Michael Reese Hospital, Chicago, Ill.*

429. Testicular and crystalline hormone implants in the rat seminal vesicle. SEYMOUR KATSH (introduced by HARRY A. CHARPIPPER). *Washington Square College, New York Univ., New York City.*

430. Hemolysis by intracellular crystal formation. BRUNO KISCH. *Fordham Univ., New York City, and Marine Biological Lab., Woods Hole, Mass.*

431. Effects of hypophysectomy on the respiration and cellular components of rat bone marrow. DAVID LANDAU* AND ALBERT S. GORDON. *Washington Square College of Arts and Science, New York Univ., New York City.*

432. Effect of renin upon excretion of hemoglobin in the rat. RICHARD W. LIPPMAN AND HELEN J. UREEN (introduced by HARRY GOLDBLATT). *Cedars of Lebanon Hospital, Los Angeles, Calif.*

433. Determination of amount of ice formed in blood at various freezing temperatures. BASILE LUYET AND PAUL SCHMIDT.* *St. Louis Univ., St. Louis, Mo.*

434. Phytotoxic properties of normal and some pathological spinal fluids. DAVID I. MACHT. *Sinai Hospital, Baltimore, Md.*

435. Cardiac acceleration to atropine cannot be conditioned. THAYER M. MACKENZIE* AND W. HORSLEY GANTT. *Johns Hopkins Univ., Baltimore, Md.*

436. Normal blood sugar in sheep and lambs. DAVID E. MANN* AND M. X. ZARROW. *Purdue Univ., Lafayette, Ind.*

437. Liver function tests on dogs in adrenal cortical insufficiency. CONSTANCE R. MARTIN* AND W. D. COLLINGS. *State Univ. of Iowa, Iowa City, and Michigan State College, East Lansing.*

438. Central nervous stimulation by implanted high frequency receiver. A. MAURO, P. D. WALL, L. M. DAVEY AND A. M. SCHER (introduced by D. H. BARRON). *Yale Univ. School of Medicine, New Haven, Conn.*

439. Histochemical distribution of indophenol oxidase and acid phosphatase in rat cortex. J. A. MEATH AND A. POPE (introduced by J. FOLCH). *McLean Hospital, Waverly, Mass., and Harvard Med. School, Boston, Mass.*

440. Effects of vitamin B_{12} and thyroprotein on growth-inhibiting action of diethylstilbestrol in rats. JOSEPH MEITES AND H. W. NEWLAND.* *Michigan State College, East Lansing.*

441. Unidirectional permeability of vaginal wall of the rabbit. N. MILLMAN,* C. G. HARTMAN, J. STAVORSKI* AND J. BOTTI.* *Ortho Research Fndn., Raritan, N. J.*

442. A recording two-channel photofluorometer for in vivo studies with fluorescein. DAVID MINARD AND MAYNARD EICHER. *Natl. Naval Med. Center, Bethesda, Md.*

443. Failure of the cold pressor response to correlate with personality tests. CAMPBELL MOSES, DOROTHY W. HULMER* AND DORA CAPWELL.* *Univ. of Pittsburgh and Allegheny Vocational Counseling Center, Pittsburgh, Pa.*

444. Effect of repeated injections of epinephrine on the self-selection of diet in rats, with special reference to sodium, potassium and chloride intake. LOUIS P. MUNAN* AND ERRETT C. ALBRITTON. *George Washington Univ. Med. School, Washington, D. C.*

445. Relation between normal human electroencephalogram and Rorschach test factors. ROBERT H. OSTER AND LEAH MILLER PROUTT.* *Univ. of Maryland Schools of Dentistry and Medicine, Baltimore.*

446. Ionic alterations in chickens infected with *P. gallinaceum*. RICHARD R. OVERMAN, ANNE C. BASS* AND T. H. TOMLINSON, JR.* *Univ. of Tennessee College of Medicine and Lab. of Tropical Diseases, USPHS, Memphis, Tenn.*

447. A strain gauge amplifier for special biological application. CLARENCE V. PESTEL* AND JOHN P. MARBARGER. *Univ. of Illinois, Chicago.*

448. Effects of adenine ingestion in the dog. SIGWIN B. RASKA. *Univ. of North Dakota School of Medicine, University.*

449. Cardiodynamic effects of shunts from the great arteries to the auricles. *S. Rodbard, S. Krause,** R. REYNOLDS,* M. LOWENTHAL* AND J. SCHACK.* *Michael Reese Hospital, Chicago, Ill.*

450. Neuromuscular excitation in the cockroach. KENNETH D. ROEDER AND ELIZABETH A. WEIANT.* *Tufts College, Medford, Mass.*

451. Effects on normal subjects of smoking cigarets with varying concentrations of nicotine. GRACE M. ROTH. *Mayo Clinic, Rochester, Minn.*

452. Stethography of the heart sound intensity envelope. ROBERT F. RUSHMER. *Univ. of Washington School of Medicine, Seattle.*

453. Site of action of Dramamine and Benadryl in correction of forced circling movements and of convulsant brain wave patterns induced by di-isopropyl fluorophosphate (DFP). M. SCHIFF,* W. G. ESMOND* AND H. E. HIMWICH. *Army Chemical Center, Md.*

454. Influence of histamine and anti-histaminic compounds on water imbibition by striated and smooth muscles and gastric mucosa. V. SENCINDIVER,* E. M. LARSON* AND M. H. F. FRIEDMAN. *Jefferson Med. College, Philadelphia, Pa.*

455. Some results suggesting endocrine participation in experimental renal hypertension.

ROGER W. SEVY,* DOROTHY HAASCH CHESS* AND GEORGE E. WAKERLIN. *Univ. of Illinois College of Medicine, Chicago.*

456. Changes in the carbon dioxide combining power of fetal blood. FRANKLIN F. SNYDER. *Harvard Med. School, Boston, Mass.*

457. Attempts to record the human electrolabyrinthogram. E. A. SPIEGEL, H. T. WYCIS* AND CH. UMLAUF.* *Temple Univ. Med. School, Philadelphia, Pa.*

458. Combined effect of anoxic anoxia and cocaine on dog blood sugar and hemoglobin. J. CLIFFORD STICKNEY, DAVID W. NORTHUP AND EDWARD J. VAN LIERE. *West Virginia Univ. School of Medicine, Morgantown.*

459. Coronary dilator activity of 1-(3′,4′-dihydroxyphenyl)-2-isopropylaminoethanol (Isuprel) and other N-alkyl homologues of epinephrine. O. O. STOLAND AND D. L. MARCHBANKS.* *Univ. of Kansas, Lawrence.*

460. Effect of tridione (3,3,5-trimethyl oxazolidine-2,4-dione) on the oxygen uptake of motor and sensory cortex of dog brain. H. C. STRUCK, D. L. STUMPFF* AND R. J. CAFFREY.* *Creighton Univ. School of Medicine, Omaha, Nebr.*

461. Temperature and convulsive activity. PAUL TESCHAN* AND E. GELLHORN. *Univ. of Minnesota, Minneapolis.*

462. Protein metabolism of fracture callus and muscle trauma studied with radioactive methionine. LESTER VAN MIDDLESWORTH. *Univ. of Tennessee, Memphis.*

463. Acceleration of growth with early sexual development in the female monkey (*Macaca mulatta*). G. VAN WAGENEN. *Yale Univ. School of Medicine, New Haven, Conn.*

464. Sensitivity of x-rayed animals to infusion of histamine, adenosine and trypsin. K. D. VENTERS* AND E. E. PAINTER. *Univ. of Illinois College of Medicine, Chicago.*

465. Subharmonics generated in the ears of humans and animals at intense sound levels. HENNING E. VON GIERKE (introduced by H. O. PARRACK). *Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio.*

466. Inhibition of catabolic effect of ACTH on nitrogen metabolism by a high potassium diet. JOHN E. WHITNEY* AND LESLIE L. BENNETT. *Univ. of California, Berkeley and San Francisco.*

467. Studies on blood pressure in dogs using an auscultatory method. C. M. WILHELMJ AND E. B. WALDMANN.* *Creighton Univ. School of Medicine, Omaha, Nebr.*

468. Adrenalectomy on frog skin potentials. MARTIN W. WILLIAMS* AND CLIFFORD A. ANGERER. *Ohio State Univ., Columbus.*

469. Reactions of diet-induced fatty livers of rats to an acid diazo dye. W. LANE WILLIAMS AND DAVID W. HOLANDER.* *Univ. of Minnesota, Minneapolis.*

AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, INC.

Forty-First Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Amino Acid Metabolism I

ROOM B

William C. Rose, *Chairman*

470. Maximum rate of urea production from various amino acids in the dog. HENRY KAMIN* AND PHILIP HANDLER. *Dept. of Biochemistry and Nutrition, Duke Univ., School of Medicine, Durham, N.C.*

471. Metabolism of intravenously administered N^{15}-labeled compounds. MAX BERENBOM* AND JULIUS WHITE. *Natl. Cancer Inst., Natl. Insts. of Health, Bethesda, Md.*

472. A study of the utilization of cystine in man. W. KNOWLTON HALL, V. P. SYDENSTRICKER* AND NATHAN REEVES.* *Depts. of Biochemistry and Medicine, Univ. of Georgia School of Medicine, and the Medical Service, Oliver General Hospital, Augusta.*

473. Studies on the synthesis of creatine in homogenates of the liver. STANLEY COHEN (introduced by F. CAJORI). *Depts. of Pediatrics and Biochemistry, Univ. of Colorado School of Medicine, Denver.*

474. Rat growth experiments with some derivatives of phenylalanine. MARVIN D. ARMSTRONG AND JOY D. LEWIS (introduced by V. DU VIGNEAUD). *Univ. of Utah College of Medicine, Salt Lake City.*

475. Microbiological response to amino acid derivatives. CHARLES H. EADES, JR. (introduced by T. P. NASH, JR.). *Dept. of Chemistry, School of Biological Sciences, Univ. of Tennessee, Memphis.*

476. Distribution of N^{15} in the amino acids of *Rhodospirillum rubrum* supplied N_2^{15}. A. C. WAGENKNECHT* AND R. H. BURRIS. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

477. Incorporation of C^{14} labeled amino acids into proteins of fractions of guinea pig liver homogenate. HENRY BORSOOK, CLARA L. DEASY,* ARIE J. HAAGEN-SMIT,* GEOFFREY KEIGHLEY* AND PETER H. LOWY.* *Kerckhoff Labs. of Biology, California Inst. of Technology, Pasadena.*

478. Characteristics of the amino acid incorporation system of liver homogenates. ELBERT A. PETERSON,* DAVID M. GREENBERG AND THEODORE WINNICK. *Div. of Biochemistry, Univ. of California Med. School, San Francisco.*

479. Incorporation of labeled amino acids into the protein of embryonic and tumor tissue homogenates. THEODORE WINNICK. *Radiation Research Lab., State Univ. of Iowa Med. School, Iowa City.*

480. Hydrolysis of glutathione. *J. R. Kimmel,** C. K. OLSON,* DONALD OKESON* AND FRANCIS BINKLEY. *Univ. of Utah College of Medicine, Salt Lake City.*

481. Synthesis of glutathione in extracts of pigeon liver. ROBERT B. JOHNSTON* AND KONRAD BLOCH. *Dept. of Biochemistry and Inst. of Radiobiology and Biophysics, Univ. of Chicago, Chicago, Ill.*

TUESDAY, APRIL 18, 9:00 A.M.

Antibacterial Agents

ROOM C

H. E. Carter, *Chairman*

482. Chemical and physical properties of tomatine and tomatidine. THOMAS D. FONTAINE, J. S. ARD* AND ROBERT MA,* C. L. OGG* AND C. O. WILLITS.* *Bureau of Agricultural and Industrial Chemistry, Agricultural Research Center, Beltsville, Md., and Eastern Regional Research Lab., Philadelphia, Pa.*

483. Antibiotic action of the pigments of *Fusarium bostrycoides*. F. A. CAJORI, M. A. HAMILTON,* E. URBANICH* AND T. PURSHOTTAM.* *Dept. of Biochemistry, Univ. of Colorado School of Medicine, Denver, and Colorado Fndn. for Research in Tuberculosis, Colorado Springs.*

484. Effect of niacin and tryptophane in counteracting toxicity of crystalline borrelidin for rats. J. M. COOPERMAN,* S. H. RUBIN AND B. TABENKIN.* *Depts. of Nutrition and Microbiology, Hoffmann-La Roche, Inc., Nutley, N.J.*

485. Diamine oxidase in streptomycin sensitive and resistant strains of *Mycobacterium smegmatis*. C. A. OWEN AND E. A. ZELLER (introduced by M. H. POWER). *Division of Biochemistry, Mayo Fndn., Rochester, Minn.*

486. A study of non-competitive antagonism with chloromycetin and related analogs of phenyl-

alanine. D. W. Woolley. *Rockefeller Inst. for Med. Research, New York City.*

487. Decomposition of chloramphenicol (chloromycetin) by bacteria. Grant N. Smith and Cecilia S. Worrel (introduced by O. D. Bird). *Research Labs. Parke, Davis & Company, Detroit, Mich.*

488. Mechanism of bacterial growth inhibition by hydroxylamine. Ernest Borek, Nathan Grossowicz* and Heinrich Waelsch. *Depts. of Biochemistry, New York State Psychiatric Institute and Columbia Univ., New York City.*

489. Effect of methionine on the toxicity of the crystalline "agene factor" against *Leuconostoc mesenteroids*. G. W. Newell and W. W. Carman (introduced by L. Reiner). *Research Labs., Wallace and Tiernan Products, Inc., Belleville, N. J.*

490. Studies on nitrogen trichloride treated prolamines. VII. Further characterization of the toxic factor. L. Reiner, F. Misani,* M. G. Cordasco,* and T. W. Fair.* *Research Labs., Wallace & Tiernan Products, Inc., Belleville, N. J.*

491. The inhibitory effects of 2,6-diaminopurine on the growth of *Lactobacillus casei*. Gertrude B. Elion* and George H. Hitchings. *Wellcome Research Labs., Tukahoe, N. Y.*

492. Application of buffered paper strips to the chromatography of polymyxins. Harold A. Nash and A. R. Smashey (introduced by Carl A. Bunde). *Research Dept., Pitman-Moore Co., Indianapolis, Ind.* (Physiol.)

493. An automatic multiple extraction apparatus. Marian W. Kies and Paul L. Davis.* *Bureau of Agricultural and Industrial Chemistry, Agricultural Research Center, Beltsville, Md.*

Tuesday, April 18, 9:00 a.m.

Glycolysis

room e

W. C. Stadie, *Chairman*

494. Comparative study on the phosphorylase content in homogenates of heart and striated muscle. Maria Fuld* and Gerhard Schmidt. *Cardiac Lab., New England Center Hospital, Boston, Mass.*

495. A phosphorylase in skeletal muscle which synthesizes glycogen directly. Irwin Feigin, Jerome Fredrick, Abner Wolf (introduced by Hans T. Clarke). *Veterans Administration Hospital, Bronx, Depts. of Pathology and Neurology, Columbia Univ., and the Neurological Inst., New York City.*

496. Amylo-1,6-glucosidase. Gerty T. Cori and Joseph Larner.* *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis, Mo.*

497. Demonstration and comparison of two glycogen fractions in liver and muscle. Walter Lyon Bloom,* Mary Schumpert* and George T. Lewis. *Dept. of Biochemistry, Emory Univ. School of Medicine, Emory University, Ga.*

498. On the nature of rabbit liver glycogen. Max Schlamowitz (introduced by David M. Greenberg). *Division of Biochemistry, Univ. of California Med. School, Berkeley.*

499. Effect of growth hormone on the glucose uptake and glycogen synthesis by the rat diaphragm. C. R. Park and William H. Daughaday (introduced by M. E. Krahl). *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis, Mo.*

500. Factors affecting glycogen formation in vitro. Ching-tseng Teng,* F. Marott Sinex* and A. Baird Hastings. *Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

501. Effect of epinephrine on glucose uptake, glycogen formation and lactic acid production in isolated rat diaphragm. Otto Walaas and Eva Walaas (introduced by G. T. Cori). *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis, Mo.*

502. Comparative metabolism of radioactive glucose in heart, brain, kidney and liver slices. Robert E. Olson, James S. Robson, Heidi Richards, and Emily G. Hirsch (introduced by Halvor N. Christensen). *Dept. of Nutrition, Harvard School of Public Health, and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

503. Inhibition of respiration and acceleration of aerobic glycolysis in tissue slices by certain α,β-unsaturated anions. H. J. Lowe,* E. C. Weinbach,* W. R. Friseli* and Leslie Hellerman. *Dept. of Physiological Chemistry, Johns Hopkins Univ. School of Medicine, Baltimore, Md.*

504. Competitive effects of substrates for hexokinase. Milton W. Slein (introduced by C. F. Cori). *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis, Mo.*

505. New coenzymes of cell-free fermentation. Paul Ohlmeyer (introduced by Arthur Kornberg). *Natl. Insts. of Health, Bethesda, Md.*

Tuesday, April 18, 9:00 a. m.

ACTH and Adrenocortical Compounds

room s

R. M. Archibald, *Chairman*

506. Pituitary preparations more potent than electrophoretically homogeneous adrenocorticotropic hormone (ACTH). Paul L. Mun-

SON, FRANCES L. NAYLOR, AND WILLIAM D. GRAY (introduced by C. N. H. LONG). *Dept. of Pharmacology, Yale Univ., New Haven.*

507. Effect of *p*H and ionic strength on biological activity of adrenocorticotropic hormone (ACTH). B. N. GHOSH,* JOHN B. RICHARDS,* MARSHALL MERKIN,* THOMAS W. BURNS,* DOUGLAS M. BROWN,* GEORGE SAYERS* AND EMIL L. SMITH. *Dept. of Pharmacology and the Lab. for the Study of Hereditary and Metabolic Disorders, Univ. of Utah, Salt Lake City.*

508. Alterations in steroids excretion after the administration of ACTH in man. SEYMOUR LIEBERMAN, LUCIE B. HARITON,* AND KONRAD DOBRINER. *Sloan-Kettering Inst. for Cancer Research, New York City.*

509. Isolation of adrenocortical compounds from normal male urine. JOHN J. SCHNEIDER (introduced by F. L. MUNRO). *Dept. of Experimental Medicine, Jefferson Med. College, Philadelphia, Pa.*

510. Comparison of lymphoid tumor and muscle electrolyte composition in patients treated with ACTH and cortisone acetate. LEONARD P. ELIEL, OLOF H. PEARSON, BERNICE KATZ, AND FRANCES W. KRAINTZ (introduced by KONRAD DOBRINER). *Division of Clin. Investigation, Sloan-Kettering Inst., New York City.*

511. Effect of ACTH and other substances on the lipid metabolism of rat brain. FREDERICK BERNHEIM AND HOWARD L. ZAUDER.* *Dept. of Physiology and Pharmacology, Duke Univ. Med. School, Durham, N. C.*

512. Effect of adrenal mince and cell free filtrate on desoxycorticosterone. KENNETH SAVARD,* LENA A. LEWIS* AND ARDA ALDEN GREEN. *Research Division, Cleveland Clinic Fndn., Cleveland, Ohio.*

513. Effect of adrenal cortical steroids on arginase activity. CHARLES D. KOCHAKIAN AND EVANGELINE ROBERTSON.* *Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

514. Effect of cortisone on protein metabolism in the rat as studied with isotopic glycine. I. CLARK (introduced by R. H. SILBER). *Merck Inst. for Therapeutic Research, Rahway, N. J.*

515. Influence of cortisone on proline oxidation. W. W. UMBREIT AND N. E. TONHAZY.* *Merck Inst. for Therapeutic Research, Rahway, N. J.*

516. Influence of the adrenal cortex on antibody production in vitro. SIDNEY ROBERTS* AND ABRAHAM WHITE. *Dept. of Physiological Chemistry, School of Medicine, Univ. of California, Los Angeles.*

TUESDAY, APRIL 18, 1:30 P.M.

Amino Acid Metabolism II

ROOM B

E. L. Tatum, *Chairman*

517. Studies in the metabolism of L-threonine. HERBERT L. MELTZER* AND DAVID B. SPRINSON. *Dept of Biochemistry, Columbia Univ., New York City.*

518. Fixation of radioactive carbon dioxide in lysine and tyrosine by decarboxylase-enzymes of these amino acids. MARTIN E. HANKE AND M. S. H. SIDDIQI.* *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

519. Metabolic fate of the isopropyl group of leucine. MINOR J. COON (introduced by D. WRIGHT WILSON). *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

520. Origin of the carbon skelton of isoleucine. EDWARD A. ADELBERG* AND E. L. TATUM. *School of Biological Sciences, Stanford Univ., Stanford, Calif., and Dept. of Bacteriology, Univ. of California, Berkeley.*

521. Enzymatic conversion of homogentisic acid to fumarylacetoacetate. ROBERT G. RAVDIN AND DANA I. CRANDALL (introduced by SAMUEL GURIN). *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

522. Effect of amino acid antagonists on enzymes involved in nitrogen catabolism. EARL FRIEDEN AND KARL DITTMER (introduced by R. W. JACKSON). *Dept. of Chemistry, Florida State Univ., Tallahassee.*

523. An inter-relationship between arginine and proline in metabolism of *Leuconostoc mesenteroides* P-60. R. J. SIRNY,* L. T. CHENG* AND C. A. ELVEHJEM. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

524. Inhibition by glucose of the synthesis of proline from glutamic acid. M. FORBES* AND M. G. SEVAG. *Dept. of Bacteriology, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

525. Effect of keto acids on the in vitro metabolism of glutamine and glutamic acid. ALTON MEISTER (introduced by JESSE P. GREENSTEIN). *Natl. Cancer Inst.*, Bethesda, Md.

526. A study of the transamination reaction using isotopic nitrogen. STUART W. TANENBAUM* AND DAVID SHEMIN. *Dept. of Biochemistry, Columbia Univ., New York City.*

527. Transamination and total free amino acid carboxyl nitrogen in induced states of growth. PAUL D. BARTLETT (introduced by OLIVER

H. GAEBLER). *Edsel B. Ford Inst. for Med. Research, Henry Ford Hospital, Detroit, Mich.*

528. Glutamo and asparto-transferases. HEINRICH WAELSCH, ERNEST BOREK, NATHAN GROSSOWICZ* AND MOGENS SCHOU.* *Depts. of Biochemistry, New York State Psychiatric Inst. and Columbia Univ., New York City.*

TUESDAY, APRIL 18, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

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TUESDAY, APRIL 18, 1:30 P.M.

Vitamins I

ROOM C

C. G. King, *Chairman*

529. Studies on the 'dietary factor' in experimental necrotizing arteritis. BLAND GIDDINGS,* PHILIP L. HARRIS AND RUSSELL L. HOLMAN.* *Dept. of Pathology, Louisiana State Univ. School of Medicine, New Orleans, and Dept. of Biochemistry, Distillation Products, Rochester, N. Y.*

530. Considerations on the indiscriminate use of the Waring Blendor: copper contamination and ascorbic acid loss. MERTON P. LAMDEN (introduced by HAROLD P. PIERCE). *Dept. of Biochemistry, College of Medicine, Univ. of Vermont, Burlington.*

531. Studies on the metabolism of radioactive L-ascorbic acid. J. J. BURNS,* H. B. BURCH* AND C. G. KING. *Dept. of Chemistry, Columbia Univ., New York City.*

532. The oxidation of L-ascorbic acid by *o*-iodosobenzoic acid. WENDELL T. CARAWAY* AND LESLIE HELLERMAN. *Dept. of Physiological Chemistry, Johns Hopkins Univ. School of Medicine, Baltimore, Md.*

533. Concentration of the factor required for the growth of *Leuconostoc citrovorum* 8081. H. E. SAUBERLICH (introduced by W. D. SALMON). *Lab. of Animal Nutrition, Alabama Polytechnic Inst., Auburn.*

534. Some biological and chemical properties of the citrovorum factor. HARRY P. BROQUIST,* E. L. R. STOKSTAD AND T. H. JUKES. *Lederle Labs. Division, American Cyanamid Company, Pearl River, N. Y.*

535. Competitive inhibition between certain salicylates and pantothenic and pantoic acids for *E. coli*. B. CONNOR JOHNSON AND EVA M. COHN.* *Division of Animal Nutrition, Univ. of Illinois, Urbana.*

536. In vivo and in vitro studies with oxythiamine and neopyrithiamine. ALBERT J. EUSEBI* AND LEOPOLD R. CERECEDO. *Dept. of Biochemistry, Fordham Univ., New York City.*

537. Mechanism of thiamine destruction by bracken fern. J. R. HAAG, BARBARA STEARMAN,* P. H. WESWIG,* R. T. PIERCE,* AND J. R. SCHUBERT.* *Agricultural Exper. Station, Oregon State College, Corvallis.*

TUESDAY, APRIL 18, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

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TUESDAY, APRIL 18, 1:30 P.M.

Fatty Acid Metabolism

ROOM E

Samuel Gurin, *Chairman*

538. A semi-micro synthesis of C^{14}-carboxyl labeled acetate. J. T. VAN BRUGGEN,* CECIL K. CLAYCOMB,* TYRA T. HUTCHENS* AND EDWARD S. WEST. *Dept. of Biochemistry, Univ. of Oregon Med. School, Portland.*

539. Studies on mechanism of acetate oxidation by bacteria. SAMUEL J. AJL* AND MARTIN D. KAMEN. *Washington Univ. Med. School, St. Louis, Mo.*

540. Fractionation of coenzyme A-dependent acetyl transfer systems. T. C. CHOU,* G. D. NOVELLI,* E. R. STADTMAN* AND FRITZ LIPMANN. *Biochemical Research Lab., Massachusetts General Hospital, and Dept. of Biological Chemistry, Harvard Med. School, Boston.*

541. Enzymatic degradation of coenzyme A. G. DAVID NOVELLI,* NATHAN O. KAPLAN AND

FRITZ LIPMANN. *Biochemical Research Lab., Massachusetts General Hospital, and Dept. of Biological Chemistry, Harvard Med. School, Boston.*

542. Coenzyme A-dependent transacetylation and transphosphorylation. EARL R. STADTMAN (introduced by FRITZ LIPMANN). *Biochemical Research Lab., Massachusetts General Hospital, and Dept. of Biological Chemistry, Harvard Med. School, Boston.*

543. C^{14}-lactic acid as acetylating agent in intact rat and in rat liver and kidney slices. WALTON W. SHREEVE (introduced by JOHN A. MUNTZ). *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio*

544. Alanine as a source of acetyl groups of excreted acetyl amines in the intact animal. H. S. ANKER. *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

545. Studies on the biosynthesis of chlorophyll. KURT SALOMON, KURT I. ALTMAN AND ROCCO DELLA ROSA (introduced by W. R. BLOOR). *Dept. of Radiation Biology, Univ. of Rochester, Rochester, N. Y.*

546. Metabolism of *n*-valeric acid in the intact rat, studied with γ-C^{14}, carboxyl-C^{13} labeled valerate. IRWIN SIEGEL (introduced by JOHN A. MUNTZ). *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

547. In vitro fatty acid metabolism and acetoacetate formation studied with C^{14}. ROBERT P. GEYER, MARY M. CUNNINGHAM AND JOYCE PENDERGAST (introduced by FREDRICK J. STARE). *Dept. of Nutrition, Harvard School of Public Health, and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

548. Oxidation of isotopic palmitic acid in animal tissues. SIDNEY WEINHOUSE, RUTH H. MILLINGTON* AND MURRAY E. VOLK.* *Research Inst. and Dept. of Chemistry, Temple Univ., Philadelphia, Pa.*

549. Absorption and distribution of C^{14} labeled fatty acids in the rat. JOHN G. CONIGLIO,* CARL E. ANDERSON* AND C. S. ROBINSON. *Dept. of Biochemistry, Vanderbilt Univ. Med. School, Nashville, Tenn.*

550. Metabolism of polyunsaturated fatty acids in chickens. RAYMOND REISER (introduced by CARL M. LYMAN). *Texas Agricultural Experiment Station, College Station.*

TUESDAY, APRIL 18, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

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TUESDAY, APRIL 18, 1:30 P.M.

Chemistry of Steroids

ROOM S

O. Wintersteiner, *Chairman*

551. Preparation of 11-ketosteroids from methyl 3α-acetoxy-$\Delta^{9,11}$-cholenate. HOMER E. STAVELY (introduced by O. WINTERSTEINER). *Division of Organic Chemistry, Squibb Inst. for Med. Research, New Brunswick, N. J.*

552. Transformation of strophanthidin into compounds structurally related to steroid hormones. MAXIMILIAN EHRENSTEIN AND MARY A. WAGNER.* *George S. Cox Med. Research Inst., School of Medicine, Univ. of Pennsylvania, Philadelphia.*

553. Platinum catalyzed hydrogen-deuterium exchange with steroids. DAVID K. FUKUSHIMA* AND T. F. GALLAGHER. *Sloan-Kettering Inst. for Cancer Research, New York City.*

554. Hydrolysis of 17-ketosteroid conjugates. HENRY J. BUEHLER,* PHILIP A. KATZMAN AND EDWARD A. DOISY. *Dept. of Biological Chemistry, St. Louis Univ. School of Medicine, St. Louis, Mo.*

555. A comparison of various techniques for the hydrolysis of conjugated 17-ketosteroids in urine. JOEL BITMAN* AND SAUL L. COHEN. *Dept. of Physiological Chemistry, Univ. of Minnesota Med. School, Minneapolis.*

556. Enzymatic hydrolysis of urinary reducing lipids. RALPH A. KINSELLA, JR., R. J. DOISY AND JOHN H. GLICK, JR. (introduced by EDWARD A. DOISY). *Dept. of Biological Chemistry, St. Louis Univ. School of Medicine, St. Louis, Mo.*

557. Conditions for determination of neutral 17-ketosteroids in urine. O. H. GAEBLER AND WILLIAM T. BEHER.* *Edsel B. Ford Inst. for Med. Research, Henry Ford Hospital, Detroit, Mich.*

558. Chromogenic values of ketosteroids in the Zimmermann reaction. HILDEGARD WILSON (introduced by KONRAD DOBRINER). *Sloan-Kettering Inst. for Cancer Research, New York City.*

559. A new color reaction for the estimation of steroid ketones having the α,β-unsaturated

ketone grouping in ring A. ERNEST J. UMBERGER (introduced by ARNOLD J. LEHMAN). *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.* (Pharmacol.).

560. Precipitation and separation of 2-hydroxy-3-naphthoic acid hydrazones of conjugated and free ketosteroids. BERNARD CAMBER (introduced by R. M. ARCHIBALD). *Hospital of the Rockefeller Inst. for Med. Research, New York City.*

561. Analysis of commercial adrenal cortex extracts by paper partition chromatography. ALEJANDRO ZAFFARONI, ROBERT B. BURTON AND E. HENRY KEUTMANN (introduced by ALEXANDER L. DOUNCE.) *Depts of Biochemistry and Medicine, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

562. A fluorescence scanner for evaluation of papergrams of adrenal cortical hormones. WILLIAM J. HAINES AND NORMAN A. DRAKE (introduced by M. H. KUIZENGA). *Research Labs., Upjohn Company, Kalamazoo, Mich.*

563. Further studies on the fractionation and photometric estimation of urinary estogens. BENJAMIN F. STIMMEL. *Rees-Stealy Med. Research Fund, Ltd., San Diego, Calif.*

TUESDAY, APRIL 18, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

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WEDNESDAY, APRIL 19, 9:00 A.M.

Joint Session on Blood Coagulation with American Society for Experimental Pathology

ROOM F

See page 462

WEDNESDAY, APRIL 19, 9:00 A.M.

Amino Acid Chemistry

ROOM B

Hans T. Clarke, *Chairman*

564. Synthesis of peptides containing amino acid antagonists. FLOYD W. DUNN AND KARL DITTMER (introduced by V. DU VIGNEAUD). *Depts. of Chemistry, Univ. of Colorado, Boulder, and Florida State Univ., Tallahassee.*

565. D-Amino acid formation: occurrence and properties of an alanine racemase. W. A. WOOD* AND I. C. GUNSALUS. *Lab. of Bacteriology, Indiana Univ., Bloomington.*

566. Enzymatic resolution of racemic histidine, cystine, and alanine. VINCENT E. PRICE,* LEON LEVINTOW* AND JESSE P. GREENSTEIN. *Natl. Cancer Inst., National Insts. of Health, Bethesda, Md.*

567. Effect of ultraviolet irradiation on certain amino acids. KLAUS SCHOCKEN (introduced by H. JENSEN). *Medical Dept. Field Research Laboratory, Fort Knox, Ky.*

568. A method for the determination of proline plus hydroxyproline carboxyl nitrogen. PAUL B. HAMILTON AND PRISCILLA J. ORTIZ.* *Dept. of Biochemistry, Alfred I. du Pont Inst., Nemours Fndn., Wilmington, Del.*

569. Spectrophotometric microdetermination of methionine, based on its reversible reaction with iodine (Lavine). BOHDAN BAKAY* AND GERRIT TOENNIES. *Inst. for Cancer Research and Lankenau Hospital Research Institute, Philadelphia, Pa.*

570. Quantitative analysis of N^{15}-labeled amino acids. HERBERT A. SOBER,* MAX BERENBOM* AND JULIUS WHITE. *Natl. Cancer Inst., Natl. Insts. of Health, Bethesda, Md.*

571. Detection and identification of metabolites in tissues by means of paper chromatography. JORGE AWAPARA (introduced by HARRY J. DEUEL, JR.). *Univ. of Texas, M. D. Anderson Hospital for Cancer Research, Houston.*

572. γ-Aminobutyric acid in brain. EUGENE ROBERTS AND SAM FRANKEL (introduced by C. CARRUTHERS). *Division of Cancer Research, Washington Univ., St. Louis, Mo.*

573. A micro technique for identification of organic compounds using isotopic indicators and paper chromatography. SIDNEY UDENFRIEND (introduced by MILDRED COHN). *Dept. of Biological Chemistry, Washington Univ. Med. School, St. Louis, Mo.*

574. Application of partition chromatography to the study of the absorption of amino acids from the intestine. ALINE UNDERHILL ORTEN, C. J. FRANCE AND K. KIOZUMI (introduced by ARTHUR H. SMITH). *Depts. of Surgery and Physiological Chemistry, Wayne Univ. College of Medicine, Detroit, Mich.*

575. Ninhydrin reaction with amines. DEAN F. DAVIES* AND HENRY A. SCHROEDER. *Hypertension Division, Dept. of Internal Medicine, and the Oscar Johnson Inst., Washington Univ. School of Medicine, St. Louis.* (Physiol.).

WEDNESDAY, APRIL 19, 9:00 A.M.

Vitamins II

ROOM C

C. A. Elvehjem, *Chairman*

576. Effect of colchicine on certain synthetic reactions in vitro. GORDON R. MCKINNEY (introduced by FREDERICK BERNHEIM). *Dept. of Physiology and Pharmacology, Duke Univ. School of Medicine, Durham, N. C.* (Pharmacol.).

577. Methylation of nicotinamide with a soluble enzyme system from rat liver. G. L. CANTONI (introduced by S. P. COLOWICK). *Dept. of Biological Chemistry, Univ. of Illinois College of Medicine, Chicago.*

578. Accumulation of a substance possessing niacin activity by a mutant strain of Neurospora. CHARLES YANOFSKY* AND DAVID M. BONNER. *Osborn Botanical Lab., Yale Univ., New Haven, Conn.*

579. N^{15} studies on the conversion of tryptophan to niacin in neurospora. DAVID M. BONNER AND C. W. H. PARTRIDGE.* *Osborn Botanical Lab., Yale Univ., New Haven, Conn.*

580. Effect of niacin on the tryptophan requirement of the rat. HARRY SPECTOR (introduced by HARRY L. FEVOLD). *Nutrition Branch, Quartermaster Food and Container Inst. for the Armed Forces, Chicago, Ill.*

581. Effect of riboflavin and vitamin B_6 deficiencies on conversion of tryptophan and 3-hydroxyanthranilic acid to quinolinic acid. L. M. HENDERSON, I. M. WEINSTOCK* AND G. B. RAMASARMA.* *Division of Biochemistry, Noyes Lab. of Chemistry, Univ. of Illinois, Urbana.*

582. Studies on the metabolism of 3-hydroxyanthranilic acid. ANN H. BOKMAN* AND B. S. SCHWEIGERT. *Division of Biochemistry and Nutrition, American Meat Inst. Fndn., and Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

583. Synthesis and microbiological activity of higher aliphatic β-keto acids. KLAUS HOFMANN, A. E. AXELROD* AND M. A. MITZ.* *Dept. of Chemistry, Univ. of Pittsburgh, Pittsburgh, Pa.*

584. Site of influence of biotin on citrulline synthesis. GLADYS FELDOTT,* PATRICIA MACLEOD* AND HENRY A. LARDY. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

585. Chemical and biological properties of biotin sulfoxide. DONALD B. MELVILLE, DOROTHY S. GENGHOF* AND JOHANNA M. LEE.* *Dept. of Biochemistry, Cornell Univ. Med. College, New York City.*

586. Preliminary characterization of two biotin-containing fractions in beef liver. DANIEL F. DICKEL,* A. E. AXELROD* AND KLAUS HOFMANN. *Dept. of Chemistry, Univ. of Pittsburgh, Pittsburgh, Pa.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Phosphorylation

ROOM E

Otto Meyerhof, *Chairman*

587. Effects of anions, cations and amino acids on bovine alkaline phosphatases. CHARLES A. ZITTLE AND EDWARD S. DELLA MONICA.* *Eastern Regional Research Lab., Philadelphia, Pa.*

588. Intracellular distribution of phosphatase activity in rat liver. ALEX NOVIKOFF, ESTELLE PODBER, AND JEAN RYAN (introduced by ELVIN A. KABAT). *Depts. of Pathology and Biochemistry, Univ. of Vermont College of Medicine, Burlington.*

589. Separation of adenosine polyphosphatases by ion-exchange and paper chromatography. WALDO E. COHN AND CHARLES E. CARTER.* *Biology Division, Oak Ridge Natl. Lab., Oak Ridge, Tenn.*

590. Characteristics of water extractable apyrases obtained from various tissues. SYLVIA FRANK AND RAKOMA LIPSHITZ (introduced by H. G. ALBAUM). *Dept. of Zoology, Columbia Univ., New York City.*

591. On the relation of ATP-ase and myosin. JOHN GERGELY (introduced by A. SZENT-GYORGYI). *Natl. Insts. of Health, Bethesda, Md.*

592. Pasteur effect in dead yeast. O. MEYERHOF AND SILVIO FIALA.* *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

593. Transphosphorylation in the absence of nucleotides. HARRY GREEN* AND O. MEYERHOF. *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

594. Enzymatic anodic phosphorylation in rat brain homogenates. W. K. MCEWEN* AND JOHN J. EILER. *College of Pharmacy, Univ. of California Med. Center, San Francisco.*

595. Influence of α-amino acids on the rate of enzymic conversion of phosphorylated compounds. OSCAR BODANSKY, OLGA BLUMENFELD,* ELAINE ZINKER* AND BLANCHE MARKARDT.* *Memorial Hospital and the Sloan-Kettering Inst. for Cancer Research, New York City.*

596. Requirements for organic phosphate in the in vitro oxidation of 6-carbon fatty acids. ROBERT F. WITTER (introduced by ELMER

STOTZ). *Dept. of Biochemistry, School of Medicine and Dentistry, Univ. of Rochester, Rochester, N. Y.*

597. On the mode of action of the sperm 'regulator,' 2, 4-dinitrophenol and usnic acid. R. BERNAL JOHNSON* AND HENRY A. LARDY. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Sterols and Other Lipides

ROOM S

Warren M. Sperry, *Chairman*

598. Preparation, bioassay and metabolism of radioactive 17-methylestradiol. H. J. NICHOLAS,* S. A. THAYER, E. A. DOISY, JR.,* WILLIAM H. ELLIOTT,* B. BOCKLAGE* AND EDWARD A. DOISY. *Depts. of Biochemistry and Internal Medicine, St. Louis Univ. School of Medicine, St. Louis, Mo.*

599. Metabolism of intravenous testosterone in the human. C. D. WEST* AND L. T. SAMUELS. *Dept. of Biological Chemistry, College of Medicine, Univ. of Utah, Salt Lake City.*

600. Influence of salt intake on chromatographic patterns of steroid excretion in essential hypertension. JACQUES GENEST, GEORGE C. COTZIAS, LEWIS K. DAHL, WILLIAM EISENMENGER AND VINCENT P. DOLE (introduced by R. M. ARCHBALD). *Hospital of the Rockefeller Inst. for Med. Research, New York City.*

601. Effect of advancing age on the cholesterol concentration of the blood serum. WARREN M. SPERRY AND MERRILL WEBB.* *Dept. of Biochemistry, New York State Psychiatric Inst., New York City.*

602. Cholesterol esterase of rat intestinal mucosa. C. R. TREADWELL, LEON SWELL* AND J. E. BYRON.* *Dept. of Biochemistry, George Washington Univ. School of Medicine, Washington, D. C.*

603. A study of cholesterol turnover rate in using deuterium as a tracer element. ROSLYN B. ALFIN-SLATER,* HARRY J. DEUEL, JR., MICHAEL C. SCHOTZ,* AND FRANK K. SHIMODA.* *Dept. of Biochemistry and Nutrition, Univ. of Southern California, Los Angeles.*

604. Biosynthesis of radioactive fatty acids and cholesterol. ROSCOE O. BRADY* AND SAMUEL GURIN. *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

605. Ergosterol synthesis in neurospora. R. C. OTTKE,* E. L. TATUM, I. ZABIN* AND K. BLOCH. *Dept. of Chemistry, Yale Univ., New Haven, Conn., Dept. of Biology, Stanford Univ., Stanford, Calif., and Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

606. Effect of dietary cholesterol on hepatic cholesterol synthesis. R. GORDON GOULD AND C. BRUCE TAYLOR.* *Rush Depts. of Biochemistry and Pathology, Presbyterian Hospital, Chicago, Ill.*

607. Structure of cerebrosides. HERBERT E. CARTER, FRED L. GREENWOOD* AND CHARLES G. HUMISTON.* *Division of Biochemistry, Noyes Lab. of Chemistry, Urbana, Ill.*

608. Isolation of crystallized acetal phospholipid from brain. S. J. THANNHAUSER, N. F. BONCODDO* AND G. SCHMIDT. *Tufts College Med. School, Boston, Mass.*

609. Brain proteolipides, a new group of protein-lipide substances soluble in organic solvents and insoluble in water. J. FOLCH AND MARJORIE LEES.* *McLean Hospital, Waverly, Mass., and Harvard Med. School, Boston, Mass.*

610. Investigation of the relation of insulin to lipid metabolism, with special reference to phospholipid. EVA C. MCGHEE,* EVANGELINE PAPAGEORGE,* WALTER L. BLOOM* AND GEORGE T. LEWIS. *Biochemistry Dept., Emory Univ. School of Medicine, Emory University, Ga.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Symposium on Chemical Transformations in Photosynthesis

ROOM E

CARL F. CORI, *Moderator of the Discussion Group*

1. Path of carbon in photosynthesis. MELVIN CALVIN AND A. A. BENSON. *Univ. of California, Berkeley.*
2. Intermediates in photosynthesis. HANS GAFFRON AND E. W. FAGER, *Univ. of Chicago, Chicago, Ill.*
3. Hydrogenase activity and photoassimilation. MARTIN D. KAMEN, *Washington Univ., St. Louis, Mo.*

Discussion Panel

1. FRITZ LIPMANN, *Massachusetts General Hospital, Boston.*
2. SEVERO OCHOA, *New York Univ., New York City.*
3. HARLAND G. WOOD, *Western Reserve Univ., Cleveland, Ohio.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Blood

ROOM B

J. Murray Luck, *Chairman*

611. Blood sugar and serum inorganic phosphate after the ingestion of D-glucose, D-fructose or D-xylose. D. A. TURNER (introduced by A. B. MACALLUM). *Dept. of Biochemistry, Univ. of Western Ontario, London, Canada.*

612. Blood phosphorus, calcium, citric acid and total protein after oral administration of calcium hexose phosphate. SAMUEL NATELSON,* MARGARET KLEIN* AND BENJAMIN KRAMER. *Pediatric Research Lab., Jewish Hospital of Brooklyn, Brooklyn, N. Y.*

613. Some properties of a red cell metabolism regulator. ALLEN F. REID AND ELLSIE B. RYAN (introduced by M. F. MASON). *Southwestern Med. School, Univ. of Texas, Dallas.*

614. Quick blood sugar method suitable for routine use and screening. EMANUEL E. MANDEL AND RAYMOND H. OWINGS (introduced by OLAF MICKELSEN). *Clinical Pathology Section, Public Health Service, Federal Security Agency, Atlanta, Ga.*

615. Estimation of blood ergothioneine concentration by the determination of bromine-labile sulfur. OSCAR TOUSTER (introduced by WILLIAM J. DARBY). *Division of Nutrition, Depts. of Biochemistry and Medicine, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

616. A procedure for the chemical estimation of free choline in plasma. HAROLD D. APPLETON,* BETTY B. LEVY,* J. MURRAY STEELE* AND BERNARD B. BRODIE. *Depts. of Biochemistry and Medicine, New York Univ. College of Medicine and New York Univ. Research Service, Goldwater Memorial Hospital, New York City.*

617. Fractionation of blood lipides in organic solvents at low temperature. ALFRED E. KOEHLER AND ELSIE HILL.* *Sansum Clinic Research Fndn. and Santa Barbara Cottage Hospital, Santa Barbara, Calif.*

618. Determination of total serum bilirubin. FERRIN B. MORELAND, WILLIAM W. O'DONNELL AND JOSEPH H. GAST, with the technical assistance of MARIE MCGINN (introduced by J. M. JOHLIN). *Dept. of Biochemistry, Baylor Univ. College of Medicine and Veterans Administration Hospital, Houston, Texas.*

619. Use of partition chromatography for the study of porphyrin metabolism in the rat. JOHN LUCAS* AND JAMES M. ORTEN. *Dept. of Physiological Chemistry, Wayne Univ. College of Medicine, Detroit, Mich.*

620. Location in protoporphyrin of carbon atoms derived from α-carbon of glycine and carbon atoms of acetic acid. JONATHAN WITTENBERG* AND DAVID SHEMIN. *Dept. of Biochemistry, Columbia Univ., New York City.*

621. Histamine release from rabbit blood cells by pure compounds-competitive inhibition phenomena. FLOYD C. MCINTIRE AND L. W. ROTH (introduced by D. W. MACCORQUODALE). *Depts. of Biochemistry and Pharmacology, Abbott Labs., North Chicago, Ill.*

622. Distribution of free amino acids between erythrocytes and plasma in normal human subjects. C. A. JOHNSON* AND OLAF BERGEIM. *Dept. of Biological Chemistry, Univ. of Illinois College of Medicine, Chicago, Ill.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Mineral Metabolism

ROOM C

Arthur H. Smith, *Chairman*

623. Urinary excretion of thiosulfate by normal human adults. JOSEPH H. GAST, FRANK L. ALDRICH, AND KAZKO ARAI (introduced by HOWARD B. LEWIS). *Dept. of Biochemistry, Baylor Univ. College of Medicine, Houston, Texas.*

624. Differential fixation of sulfate by tissues maintained in vitro. LAURENCE L. LAYTON (introduced by E. V. MCCOLLUM). *Dept. of Biochemistry, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md.*

625. Sulfur metabolism of *Escherichia coli*. D. B. COWIE AND M. SANDS (introduced by HELEN M. DYER). *Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D. C.*

626. Carbon dioxide, inorganic phosphate and cation content of muscle in potassium deficiency. LYTT I. GARDNER, ELSIE A. MACLACHLAN AND HELEN BERMAN (introduced by JAMES C. ANDREWS). *Children's Med. Service, Massachusetts General Hospital, and Dept. of Pediatrics, Harvard Med. School, Boston.*

627. Nitrogen and ash content of soft tissues adjacent to bones and joints. L. J. STROBINO (introduced by PAUL B. HAMILTON). *Dept. of Biochemistry, Alfred I. du Pont Inst., Nemours Fndn., Wilmington, Del., and Dept. of Orthopedic Surgery, Univ. of Pennsylvania, Philadelphia.*

628. Excretion of radioactive phosphorus into the alimentary tract of rats on high molybdenum and copper diets. RAY L. SHIRLEY,* RILEY DEAL OWENS* AND GEORGE K. DAVIS. *Dept. of Animal Husbandry and Nutrition, Florida Agricultural Experiment Station, Gainesville.* (Nutrition).

629. Influence of age on the uptake of radioactive phosphate by the skeleton of the rat. JOHN F. BONNER (introduced by ERIC L. ALLING). *Dept. of Radiation Biology, School of Medicine*

and Dentistry, Univ. of Rochester, Rochester, N. Y. (Pathol.).

630. Studies on the surface chemistry of bone. I. Recrystallization. W. F. NEUMAN AND B. J. MULRYAN.* *Dept. of Radiation Biology, School of Medicine and Dentistry, Univ. of Rochester, Rochester, N. Y.* (Pharmacol.)

631. Rates of calcium exchange in the system; powdered bone in calcium chloride solution. HAROLD CARPENTER HODGE, ELIZABETH E. UNDERWOOD* AND MARLENE FALKENHEIM.* *Dept. of Radiation Biology, School of Medicine and Dentistry, Univ. of Rochester, Rochester, N. Y.* (Pharmacol.)

632. Studies of the cellular calcifying mechanism. ALBERT E. SOBEL, ALBERT HANOK* AND ALEXANDER WOLFFE.* *Jewish Hospital of Brooklyn, Brooklyn, N. Y.*

633. A simple densiometric determination of heavy water. LEO A. SAPIRSTEIN (introduced by WALTER MARX). *Dept. of Physiology, Univ. of Southern California Med. School, Los Angeles.*

634. Iodine in nutrition. ISIDOR GREENWALD. *Dept. of Chemistry, New York Univ. College of Medicine, New York City.* (Nutrition).

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Blood Proteins and Enzymes

ROOM B

Edwin J. Cohn, *Chairman*

635. Electrometric determination of unidentified serum constituents. EDNA ANDREWS* AND ADRIAN C. KUYPER. *Dept. of Physiological Chemistry, Wayne Univ. College of Medicine, Detroit, Mich.*

636. Ultracentrifugal stratification of human serum lipoproteins. WILLIAM H. GOLDWATER, MALCOLM L. RANDOLPH, J. R. SNAVELY, ROY H. TURNER, AND WALTER G. UNGLAUB (introduced by WILLIAM B. WENDEL). *Depts. of Medicine and Physics, Tulane Univ., New Orleans, La.*

637. Estimation of lipoproteins in serum immunologically. H. G. KUNKEL (introduced by STANFORD MOORE). *Hospital of Rockefeller Inst. for Med. Research, New York City.*

638. Minor role of non-hepatic tissues in plasma protein synthesis observed with the aid of lysine-ε-C^{14}. C. G. BLY,* L. L. MILLER* AND W. F. BALE. *Depts. of Radiation Biology and Pathology, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.* (Physiol.)

639. Plasma protein synthesis observed in direct study of the liver with aid of lysine-ε-C^{14}. L. L. MILLER, C. G. BLY,* M. L. WATSON* AND W. F. BALE.* *Depts. of Radiation Biology and Pathology, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

640. Net production of serum albumin in vitro. THEODORE PETERS, JR.* AND CHRISTIAN B. ANFINSEN. *Biophysical Lab. and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

641. Hemoglobin, oxyhemoglobin and anhydrohemoglobin. FELIX HAUROWITZ, SAIDE TUNC* AND RADIYE CINDI.* *Dept. of Chemistry, Indiana Univ., Bloomington.*

642. Masking of carboxylate groups in native horse carbonylhemoglobin. JACINTO STEINHARDT AND ETHEL M. ZAISTER.* *Dept. of Chemistry, Massachusetts Inst. of Technology, Cambridge.*

643. A study of alkali hematin prepared from hemin. HAROLD L. DOBSON,* JOSEPH H. GAST* AND JAMES A. GREENE. *Depts. of Biochemistry and Medicine, Baylor Univ. College of Medicine, Houston, Texas.* (Physiol.)

644. Ratio of sickle cell anemia to normal hemoglobin in sicklemics. IBERT C. WELLS AND HARVEY A. ITANO (introduced by L. ZECHMEISTER). *Gates and Crellin Labs. of Chemistry, California Inst. of Technology, Pasadena.*

645. Simplified serum alkaline and acid phosphatase method using phenolphthalein monophosphate substrate. ALEXANDER B. GUTMAN. *Columbia Research Service, Goldwater Memorial Hospital, and Dept. of Medicine, College of Physicians and Surgeons, Columbia Univ., New York City.*

646. Effect of total body x-radiation on the plasma alkaline phosphatase of rats. STEPHAN LUDEWIG. *Biochemical Lab., Univ. of Virginia, Charlottesville.*

THURSDAY, APRIL 20, 9:00 A.M.

Nucleic Acids

ROOM C

W. M. Stanley, *Chairman*

647. Radioactive crystalline ribonuclease. CHRISTIAN B. ANFINSEN. *Biophysical Lab. and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

648. Action of ribonuclease and its bearing on structure of yeast ribonucleic acid. GERHARD

SCHMIDT, NEPOMUK ZÖLLNER,* LISA HECHT,* RICARDO CUBILES,* MARIA WARGON* AND S. J. THANNHAUSER. *Tufts College Med. School, Boston, Mass.*

649. Analysis of the ribonucleic acid of the large cytoplasmic granules (mitochondrial fraction) of beef pancreas. JAMES L. FAIRLEY, JR.,* HARRY L. SEAGRAN* AND HUBERT S. LORING. *Dept. of Chemistry and School of Medicine, Stanford Univ., Stanford, Calif.*

650. Pyrimidine content of certain pentose and desoxypentose nucleic acids. ANTHONY PIRCIO* AND LEOPOLD R. CERECEDO. *Dept. of Biochemistry, Fordham Univ., New York City.*

651. Quantitative micro-analysis of nucleic acid purines and pyrimidines without prior isolation of the nucleic acids. A. MARSHAK AND H. J. VOGEL.* *Dept. of Chemistry, New York Univ., Bellevue Med. Center, New York City.* (Physiol.).

652. Incorporation of glycine-2-C^{14} into the proteins and nucleic acids of normal and neoplastic rat tissues. G. A. LEPAGE AND CHARLES HEIDELBERGER.* *McArdle Memorial Lab., Univ. of Wisconsin, Madison.*

653. Sources of bacteriophage nitrogen. LLOYD M. KOZLOFF,* KATHRYN KNOWLTON,* FRANK W. PUTNAM, AND E. A. EVANS, JR. *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

654. Distribution pattern of P^{32} in the desoxyribonucleic acid-protein complex of the intestinal tract mucosa. FELIX FRIEDBERG (introduced by VERNON A. WILKERSON). *Dept. of Biochemistry, College of Medicine, Howard Univ., Washington, D. C.*

655. Nucleic acids in the development and division of plant cells. MAURICE OGUR AND RALPH O. ERICKSON (introduced by WAYNE UMBREIT). *Botanical Labs., Univ. of Pennsylvania, Philadelphia.*

656. Interaction of quinoline and acridine derivatives with nucleoproteins and nucleic acids. FRANK S. PARKER,* J. LOGAN IRVIN, AND ELINOR MOORE IRVIN.* *Dept. of Physiological Chemistry, Johns Hopkins Univ. School of Medicine, Baltimore, Md.*

657. Liver desoxyribonucleoprotein. J. MURRAY LUCK, DONALD KUPKE,* ALBERTA RHEIN* AND A. CLARK GRIFFIN.* *Dept. of Chemistry, Stanford Univ., Stanford, Calif.*

658. Isolation of cell nuclei in neutral medium. MARY L. PETERMANN AND ROSE M. SCHNEIDER.* *Sloan-Kettering Inst., New York City.*

659. In vivo effect of a toxic dose of P^{32} on phosphorus fractions of rat thymus. P. S. LAVIK, HELEN HARRINGTON, AND G. W. BUCKALOO (introduced by H. G. WOOD). *Atomic Energy Med. Research Project, Western Reserve Univ., Cleveland, Ohio.*

THURSDAY, APRIL 20, 9:00 A.M.

Tricarboxylic Acid Cycle. I

ROOM E

Eric G. Ball, *Chairman*

660. Genesis of C_4 dicarboxylic acids in the tricarboxylic acid cycle. S. F. CARSON,* J. W. FOSTER, D. S. ANTHONY* AND E. F. PHARES.* *Biology Division, Oak Ridge Natl. Lab., Oak Ridge, Tenn.*

661. The $2C_2$ condensation reaction in citric acid formation by a strain of *Aspergillus niger*. J. W. FOSTER, S. F. CARSON* AND W. E. JEFFERSON.* *Biology Division, Oak Ridge Natl. Lab., Oak Ridge, Tenn.*

662. Enzymatic formation of citric acid studied with C^{14}-labeled oxalacetate. HARRY RUDNEY,* VICTOR LORBER, M. F. UTTER* AND MARGARET COOK.* *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.* (Physiol.)

663. Enzymatic synthesis of citric acid. JOSEPH R. STERN* AND SEVERO OCHOA. *Dept. of Pharmacology, New York Univ. College of Medicine, New York City.*

664. Alternative metabolic pathways in rat liver homogenates. RICHARD O. RECKNAGEL,* AND VAN R. POTTER. *McArdle Memorial Lab., Med. School, Univ. of Wisconsin, Madison.*

665. Fixation of carbon dioxide by mammalian tissues and its relation to carbohydrate metabolism. ROBERT K. CRANE* AND ERIC G. BALL. *Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

666. Carbon dioxide fixation in dicarboxylic acids. M. F. UTTER. *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

667. Mechanism of carbon dioxide fixation in *M. lysodeikticus*. ROSABELLE MCMANUS (introduced by M. F. UTTER). *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

668. Enzymatic incorporation of CO_2 in oxalacetate. ISAAC HARARY,* J. B. VEIGA SALLES* AND SEVERO OCHOA. *Dept. of Pharmacology, New York Univ. College of Medicine, New York City.*

669. Effect of zinc on the oxidation of citric acid cycle intermediates. H. O. KUNKEL (introduced by JAMES B. SUMNER). *Dept. of Biochemistry and Nutrition, Cornell Univ., Ithaca, N. Y.*

670. Isocitric acid breakdown in yeast. ARTHUR KORNBERG, *Natl. Insts. of Health, Bethesda, Md.*

THURSDAY, APRIL 20, 9:00 A.M.

Choline Metabolism

ROOM S

Vincent du Vigneaud, *Chairman*

671. Influence of choline and inositol upon the rate of deposition and removal of liver lipids. C. H. BEST, C. C. LUCAS, JEAN M. PATTERSON* AND JESSIE H. RIDOUT.* *Banting and Best Dept. of Med. Research, Univ. of Toronto, Toronto, Ont., Canada.*

672. Effect of acute choline deficiency on the tissue lipids of young puppies. J. M. MCKIBBIN. *Dept. of Biochemistry, Syracuse Univ. College of Medicine, Syracuse, N. Y.*

673. Increased urinary excretion of choline in the phosphorus poisoned dog. CARL E. ANDERSON,* C. FREEMAN LUCKEY* AND C. S. ROBINSON. *Dept. of Biochemistry, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

674. Lipide phosphorylation by surviving slices of the liver of rats on various diets. CAMILLO ARTOM AND MARJORIE A. SWANSON.* *Dept. of Biochemistry, Bowman Gray School of Medicine, Winston-Salem, N. C.*

675. Role of methionine as methyl donor for choline synthesis in the chick. K. A. BURKE,* R. F. NYSTROM* AND B. CONNOR JOHNSON. *Division of Animal Nutrition and Radiocarbon Lab., Univ. of Illinois, Urbana.*

676. Synthesis of labile methyl groups by animal tissues in vivo and in vitro. ARNOLD D. WELCH* AND WARWICK SAKAMI. *Depts. of Pharmacology and Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

677. Acetone metabolism in the intact rat. WARWICK SAKAMI. *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

678. Biological formation of formate and formaldehyde from methyl compounds in liver slices. PHILIP SIEKEVITZ* AND DAVID M. GREENBERG. *Division of Biochemistry, Univ. of California Med. School, San Francisco.*

679. Inhibition of rat liver choline oxidase by urethane in vitro. CECILIA K. KEITH AND JAMES S. DINNING (introduced by PAUL L. DAY). *Dept. of Biochemistry, School of Medicine, Univ. of Arkansas, Little Rock.*

680. Activity of inhibitors of acetylcholine esterase as function of pH. IRWIN B. WILSON AND FELIX BERGMANN (introduced by DAVID NACHMANSOHN). *Dept. of Neurology, College of Physicians and Surgeons, Columbia Univ., New York City.* (Physiol.)

681. A survey of serum cholinesterases in a number of mammalian species. MILTON GJELHAUG LEVINE, ROBERT E. HOYT, AND ANITA A. SURAN. *Inst. of Experimental Medicine, College of Medical Evangelists, Los Angeles, Calif.* (Immunol.)

682. Factors affecting synthesis of acetylcholine (ACh) by rat brain cortex slices. HUGH MCLENNAN* AND K. A. C. ELLIOTT. *Montreal Neurological Inst., McGill Univ., Montreal, Que., Canada.*

THURSDAY, APRIL 20, 1:30 P.M.

Carbohydrate Metabolism I

ROOM A

Gerty T. Cori, *Chairman*

683. Potassium compounds associated with carbohydrate metabolism of *Escherichia coli*. E. T. BOLTON (introduced by J. B. ALLISON). *Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D. C.*

684. Role of potassium in cellular metabolism. I. Z. ROBERTS (introduced by L. B. FLEXNER). *Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D. C.*

685. Effects of magnesium on phosphate metabolism in vivo. P. H. ABELSON AND ELAINE ALDOUS (introduced by DEAN BURK). *Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D. C.*

686. Formation of acetate from acetaldehyde in cell-free yeast extracts. SIMON BLACK. *Chemical Division, Dept. of Medicine, Univ. of Chicago, Chicago, Ill.*

687. α-Acetolactic acid, an intermediate in acetylmethylcarbinol formation. ELLIOT JUNI (introduced by L. O. KRAMPITZ). *Dept. of Microbiology, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

688. Lactic acid oxidising system of *Escherichia coli*. NIELS HAUGAARD (introduced by W. C. STADIE). *John Herr Musser Dept. of Research Medicine, Univ. of Pennsylvania, Philadelphia.*

689. Glyoxalases. E. RACKER. *Dept. of Microbiology, New York Univ. College of Medicine and College of Dentistry, New York City.*

690. Inhibition of succinic dehydrogenase by methylglyoxal. A regulatory mechanism of sulfhydryl enzymes. ERNEST KUN. *Depts. of Medicine, Div. Inf. Disease and Biochemistry, Tulane Univ., New Orleans, La.* (Pharmacol.)

691. A comparison of D-3, glyceraldehyde phosphate dehydrogenase from yeast and from skeletal muscle. SIDNEY F. VELICK AND SIDNEY UDENFRIEND.* *Dept. of Biological Chemistry, Washington Univ. Med. School, St. Louis, Mo.*

692. Enzyme preparations from *Acetobacter suboxydans* oxidizing inositol. ROBERT E. FRANZL* AND ERWIN CHARGAFF. *Dept. of Biochemistry, College of Physicians and Surgeons, Columbia Univ., New York City.*

693. Chemical components and metabolic activities of the relapsing fever spirochete (*Borrelia novyi*). RALPH W. MCKEE AND QUENTIN M. GEIMAN.* *Dept. of Biological Chemistry, Harvard Med. School, and Dept. of Tropical Public Health, Harvard School of Public Health, Boston, Mass.*

THURSDAY, APRIL 20, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

THURSDAY, APRIL 20, 1:30 P.M.

Physical Chemistry of Proteins

ROOM B

T. L. McMeekin, *Chairman*

694. Permeability of axonal surface membranes to amino acids. SAUL R. KOREY (introduced by H. T. CLARKE). *Dept. of Neurology, College of Physicians and Surgeons, Columbia Univ., New York City.*

695. Protein permeability through thin organic layers. H. J. TRURNIT (introduced by DAVID B. DILL). *Med. Division, Army Chemical Center, Md.*

696. Specific volumes and molecular weights of d-glyceraldehyde phosphate dehydrogenase and aldolase. JOHN FULLER TAYLOR, *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis, Mo.*

697. Composition and densities of β-lactoglobulin crystals in sucrose and in serum albumin solutions. T. L. MCMEEKIN, M. L. GROVES,* AND N. J. HIPP.* *Eastern Regional Research Lab., Philadelphia, Pa.*

698. A study of the scattering of light in myosin solutions. W. F. H. M. MOMMAERTS (introduced by GEORGE W. SCHWERT). *Dept. of Biochemistry, Duke Univ. School of Medicine, Durham, N. C.*

699. Deamination and denaturation of crystalline egg albumin. PAUL H. MAURER,* AND MICHAEL HEIDELBERGER. *Depts. of Biochemistry and Medicine, College of Physicians and Surgeons, Columbia Univ., New York City.*

700. Influence of pH upon rates of denaturation of some proteins. MILTON LEVY AND ROBERT C. WARNER. *Dept. of Chemistry, New York Univ. College of Medicine, New York City.*

701. An investigation of an electrophoretically homogeneous mucoprotein isolated from normal human plasma. HENRY E. WEIMER,* JOHN W. MEHL AND RICHARD J. WINZLER. *Dept. of Biochemistry and Nutrition, Univ. of Southern California School of Medicine, Los Angeles.*

702. Electrophoretic studies of an in vitro reaction between adenosine and rat serum. MARIE A. FISCHER (introduced by W. S. MCELLROY). *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pittsburgh, Pittsburgh, Pa.*

703. Two-dimensional ionophoresis and electrophoresis. E. L. DURRUM (introduced by RAY G. DAGGS). *Med. Dept. Field Research Lab., Fort Knox, Ky.* (Physiol.)

704. Electrophoretic studies of plasma proteins in children with rheumatic fever. ELIZABETH L. KNAPP,* ROBERT L. JACKSON* AND JOSEPH I. ROUTH. *Depts. of Pediatrics and Biochemistry, College of Medicine, State Univ. of Iowa, Iowa City.*

705. Electrophoretic analyses of plasma and serum proteins in rheumatoid arthritis and rheumatoid spondylitis. W. D. PAUL, AND JOSEPH I. ROUTH. *Depts. of Medicine and Biochemistry, College of Medicine, State Univ. of Iowa, Iowa City.*

THURSDAY, APRIL 20, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

THURSDAY, APRIL 20, 1:30 P.M.

Nucleosides and Nucleotides

ROOM C

H. S. Loring, *Chairman*

706. Studies on the metabolism of pyrimidine ribosides. L. M. PAEGE* AND F. SCHLENK. *Dept. of Bacteriology, Iowa State College, Ames.*

707. Metabolism of desoxyribosides in *Escherichia coli*. L. A. MANSON* AND J. O. LAMPEN. *Dept. of Biological Chemistry, Washington Univ. School of Medicine, St. Louis.*

708. Biological activity of some uridine derivatives. MARTIN ROBERTS, T. KAY FUKUHARA, AND DONALD W. VISSER (introduced by RICHARD J. WINZLER). *Dept. of Biochemistry and Nutrition, Univ. of Southern California School of Medicine, Los Angeles.*

709. New nucleosidases in *Lactobacillus pentosus*. T. P. WANG (introduced by J. O. LAMPEN). *Dept. of Microbiology, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

710. Synthesis of unusual quantities of pyridine nucleotides by human erythrocytes, in vitro. IRWIN G. LEDER,* W. A. PERLZWEIG AND PHILIP HANDLER. *Dept. of Biochemistry and Nutrition, Duke Univ. School of Medicine, Durham, N. C.*

711. Nucleotide content of human blood. HARRY G. ALBAUM, THEODORE CAYLE* AND ARTHUR SHAPIRO.* *Dept. of Biology, Brooklyn College, Brooklyn, N. Y.*

712. Isolation of three labile phosphate compounds containing uracil from penicillin-treated *Staphylococcus aureus* cells. JAMES T. PARK. *Camp Detrick, Frederick, Md.*

713. Purine ribose nucleotide inhibition of desoxyribonucleic acid utilization by *Lactobacillus bifidus*. HELEN R. SKEGGS,* LEMUEL D. WRIGHT, KATHERINE VALENTIK,* HELGA NEPPLE* AND JOHN SPIZIZEN.* *Med. Research Division, Sharp and Dohme, Glenolden, Pa.*

714. Nucleotidases of liver. MARJORIE A. SWANSON (introduced by C. ARTOM). *Dept. of Biochemistry, Bowman Gray School of Medicine, Winston-Salem, N. C.*

715. Specific nucleotidases. LEON A. HEPPEL AND R. J. HILMOE.* *Natl. Insts. of Health, Bethesda, Md.*

716. A mild dephosphorylation of pyrimidine nucleotides. JAMES E. BACHER* AND FRANK WORTHINGTON ALLEN. *Dept. of Biochemistry, Univ. of California Med. School, Berkeley.*

THURSDAY, APRIL 20, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

THURSDAY, APRIL 20, 1:30 P.M.

Proteolytic Enzymes

ROOM S

Joseph S. Fruton, *Chairman*

717. A photometric ninhydrin method for the measurement of proteolysis. THEODORE B. SCHWARTZ* AND FRANK L. ENGEL. *Dept. of Medicine Duke Univ., Durham, N. C.* (Physiol.)

718. Effects of anions on the activity of carboxypeptidase. HANS NEURATH AND GLENN DE MARIA.* *Dept. of Biochemistry, Duke Univ. School of Medicine, Durham, N. C.*

719. Proteolytic activity of rabbit muscle. JOHN E. SNOKE* AND HANS NEURATH. *Dept. of Biochemistry, Duke Univ. School of Medicine, Durham, N. C.*

720. Effect of high pressures on the activity of proteinases. A. LAURENCE CURL* AND EUGENE F. JANSEN. *Enzyme Research Division, Bureau Agricultural and Industrial Chemistry, USDA, Albany, Calif.*

721. Further studies of equilibrium and exchange reactions involving peptides, amino acids, and proteolytic enzymes. IVAN D. FRANTZ, JR. AND ROBERT B. LOFTFIELD (introduced by LEWIS L. ENGEL). *Med. Labs., Collis P. Huntington Memorial Hospital of Harvard Univ., Massachusetts General Hospital, Boston.*

722. Synthesis of high molecular-weight protein-like substances by chymotrypsin. HENRY TAUBER. *Natl. Insts. of Health, Inst. of Microbiology, U. S. Marine Hospital, Staten Island, N. Y.*

723. Potentiation of esterase activity of chymotrypsin by electrolytes. BERNARD J. JANDORF. *Biochemistry Section, Medical Div., Army Chemical Center, Md.*

724. Reaction of chymotrypsin with diisopropylfluorophosphate and with tetraethylpyrophosphate. J. H. FLEISHER,* B. J. JANDORF, W. H. SUMMERSON, AND D. P. NORTON.* *Biochemistry Section, Med. Division, Army Chemical Center, Md.*

725. A crystalline, active oxidation product of α-chymotrypsin. EUGENE F. JANSEN, M.D. FELLOWS NUTTING,* A. LAURENCE CURL* AND A. K. BALLS. *Enzyme Research Division, Bureau, Agricultural and Industrial Chemistry, USDA, Albany, Calif.*

726. Reversible denaturation of chymotrypsinogen. MAX A. EISENBERG* AND GEORGE W. SCHWERT. *Dept. of Biochemistry, Duke Univ., Durham, N. C.*

727. Characteristics of the proteose trypsin inhibitor of soy beans. DONALD E. BOWMAN. *Dept. of Biochemistry and Pharmacology, Indiana Univ. School of Medicine, Indianapolis.*

728. Trypsin inhibitor in colostrum. M. LASKOWSKI, JR.* AND M. LASKOWSKI. *Dept. of Biochemistry, Marquette Univ. School of Medicine, Milwaukee, Wis.*

729. Hydrolysis of protamines by cathepsins. MARY E. MAVER AND ANTOINETTE E. GRECO.* *Natl. Cancer Inst., Natl. Insts. of Health, USPHS, Bethesda, Md.*

THURSDAY, APRIL 20, 4:30 P.M.

Biochemistry Business Meeting

ROOM B

FRIDAY, APRIL 21, 9:00 A.M.

Protein Metabolism

ROOM B

Clarence P. Berg, *Chairman*

730. Inheritance of the rate of protein synthesis in the liver of inbred strains of rats. ROBERT RUTMAN (introduced by HAROLD TARVER). *Univ. of California, Berkeley.*

731. Role of dietary proteins in development of sex organs of young rats under stimulus of a gonadotrophin. RICHARD S. YAMAMOTO* AND BACON F. CHOW. *Dept. of Biochemistry, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md.*

732. Evaluation of rates of metabolic processes from excretion data in isotopic feeding experiments. HSIEN WU (introduced by EMMETT B. CARMICHAEL). *Biochemistry. Dept., Med. College of Alabama, Birmingham.*

733. Influence of dietary protein on glutamine content of rat tissues. HENRY TIGERMAN* AND ROBERT W. MACVICAR. *Dept. of Agricultural Chemistry Research, Oklahoma Agricultural Experiment Station, Stillwater.*

734. Effect of protein starvation on enzyme activity of normal and regenerating rat liver. OTTO ROSENTHAL, JAMES C. FAHL,* GORDON M. KARN* AND CHARLES S. ROGERS.* *Harrison Dept. of Surgical Research, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

735. Nature of hepatic protein lost during a 2-day fast. JULIUS SCHULTZ* AND HARRY M. VARS. *Harrison Dept. of Surgical Research, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

736. Alterations in tissue proteins of dogs following prolonged fasting. ELMORE HOLMES* AND DEMPSIE B. MORRISON. *Dept. of Chemistry, Univ. of Tennessee, Memphis.*

737. Sulfur balance of rats fed excess DL-methionine plus glycine or DL-alanine. JAY S. ROTH,* JAMES B. ALLISON AND LAWRENCE J. MILCH.* *Bureau of Biological Research, Rutgers Univ., New Brunswick, N. J.*

738. Synthesis of some phosphate fractions in the threonine-deficient rat. S. A. SINGAL, V. P. SYDENSTRICKER,* JULIA M. LITTLEJOHN,* H. T. HAYES* AND S. J. HAZAN.* *Univ. of Georgia School of Medicine, Augusta.*

739. Relation between propagation of mouse encephalomyelitis virus and uptake of radiophosphate by minced brain from mice. RICHARD J. WINZLER, H. E. PEARSON* AND MAX E. RAFELSON.* *Depts. of Biochemistry and Nutrition and of Microbiology, Univ. of Southern California School of Medicine, and Lab. Division of Los Angeles County Hospital, Los Angeles.*

FRIDAY, APRIL 21, 9:00 A.M.

Vitamin B_{12} and Folic Acid

ROOM C

Karl Folkers, *Chairman*

740. Comparison of vitamin B_{12} and vitamin B_{12b}. H. H. FRICKE,* BETTY LANIUS,* A. F. DEROSE,* M. LAPIDUS* AND D. V. FROST. *Abbott Labs., North Chicago, Ill.*

741. Relation of vitamin B_{12b} to vitamin B_{12} and the biological activities of these compounds. E. L. R. STOKSTAD, T. H. JUKES, JOHN A. BROCKMAN,* J. V. PIERCE* AND H. P. BROQUIST.* *Lederle Labs. Division, American Cyanamid Co., Pearl River, N. Y.*

742. Effect of reducing agents on the biological activities of crystalline vitamin B_{12}. CALVIN A. LANG* AND BACON F. CHOW. *Dept. of Biochemistry, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md.*

743. Partition chromatography of the vitamin B_{12} group of factors. E. LESTER SMITH, W. F. J. CUTHBERTSON, A. WALKER, K. A. LEES (introduced by F. S. DAFT). *Research Division, Glaxo Labs. Ltd., Greenford, Middlesex, England, and Fermentation Division, Glaxo Labs. Ltd., Barnard Castle, Co. Durham, England.*

744. Sulfur-containing amino acids in growth with a 'labile methyl'-free diet containing vitamin B_{12}. JAKOB A. STEKOL, MARY A. BENNETT, KATHRYN WEISS,* PHILIP HALPERN* AND SIDNEY WEISS.* *Lankenau Hospital Research Inst. and Inst. for Cancer Research, Philadelphia, Pa.*

745. Effect of vitamin B_{12} on the reduction of S-S compounds in vitro. JACOB W. DUBNOFF. *California Inst. of Technology, Pasadena.*

746. Influence of vitamin B_{12} on a succinylsulfathiazole-induced dietary deficiency in rats. CONRADO F. ASENJO. *Dept. of Chemistry and Nutrition, School of Tropical Medicine, Univ. Puerto Rico, San Juan.*

747. Nature of intrinsic factor. SAMUEL H. EPPSTEIN,* CURTIS E. MEYER, FRANK H. BETHELL* AND BYRON E. HALL.* *Research Labs., Upjohn Company, Kalamazoo, Mich., Thomas Henry Simpson Memorial Inst., Ann Arbor, Mich., and Mayo Clinic, Rochester, Minn.*

748. Failure of pteroylglutamic acid (PGA) to function as growth factor for *L. arabinosus* (17-5). BERNARD W. KOFT,* E. STEERS* AND M. G. SEVAG. *Dept. of Bacteriology, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

749. Effect of pteroylglutamic acid on the incorporation of radioactive glycine in chick liver homogenates. JOHN R. TOTTER, BARBARA KELLEY,* PAUL L. DAY AND RAYMOND R. EDWARDS.* *Dept. of Biochemistry, School of Medicine, Univ. of Arkansas, Little Rock, and Inst. of Science and Technology, Fayetteville, Ark.*

750. Lipotropic effect of pteroylglutamic acid on rats receiving toxic levels of dietary glycine. BARBARA KELLEY* AND JOHN R. TOTTER. *Dept. of Biochemistry, School of Medicine, Univ. of Arkansas, Little Rock.*

751. Effect of cysteine and hydrogen sulfide on the pteroylglutamic acid conjugase of hog kidney. C. H. HILL AND M. L. SCOTT (introduced by L. C. NORRIS). *Cornell Univ., Ithaca, N. Y.*

FRIDAY, APRIL 21, 9:00 A.M.

Tricarboxylic Acid Cycle. II

ROOM E

E. A. Evans, Jr., *Chairman*

752. Effects of narcotics and convulsants on rat tissue metabolism. JAMES L. WEBB* AND K. A. C. ELLIOTT. *Montreal Neurological Inst., McGill Univ., Montreal, Que., Canada.*

753. Determination of fumaric, cis-aconitic and alpha-ketoglutaric acids in rabbit kidney and liver by partition chromatography. LAWRENCE M. MARSHALL AND FREDERICK D. DREW (introduced by VERNON A. WILKERSON). *Dept. of Biochemistry, College of Medicine, Howard Univ., Washington, D. C.*

754. Studies on aconitase. SHERMAN R. DICKMAN AND A. A. CLOUTIER (introduced by EMIL L. SMITH). *Dept. of Biological Chemistry, College of Medicine, Univ. of Utah, Salt Lake City.*

755. A mechanism of fluoroacetate inhibition. WILLARD B. ELLIOTT* AND GEORGE KALNITSKY. *Dept. of Biochemistry, College of Medicine, State Univ. of Iowa, Iowa City.*

756. Effect of fluoroacetate on reactions in the Krebs oxidative cycle. VAN R. POTTER AND HARRIS BUSCH.* *McArdle Memorial Lab., Med. School, Univ. of Wisconsin, Madison.*

757. Factors affecting pyruvate and lactate metabolism in cardiac muscle slices. O. NEAL MILLER AND ROBERT E. OLSON (introduced by HALVOR N. CHRISTENSEN). *Dept. of Nutrition, Harvard School of Public Health, and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

758. Metabolic competition of pyruvate and lactate in cardiac muscle slices. MYRON C. BRIN AND ROBERT E. OLSON (introduced by FREDRICK J. STARE). *Dept. of Nutrition, Harvard School of Public Health, and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

759. Inhibition of the 'oxalacetic oxidase system' in tissues adjacent to methylcholanthrene tumors. ROBERT M. HILL, DORSEY E. HOLTKAMP* AND ENID K. RUTLEDGE.* *Depts. of Biochemistry and Pathology, Univ. of Colorado Med. Center, Denver.*

760. Effect of amino acids on the non-enzymatic decarboxylation of oxalacetic acid. SAMUEL P. BESSMAN (introduced by JOSEPH H. ROE). *Research Fndn. of Children's Hospital, Washington, D. C.*

761. Ketoglutaric acid oxidase: an assay procedure. W. WILBUR ACKERMAN (introduced by THOMAS FRANCIS, JR.). *Dept. of Epidemiology and Virus Laboratory School of Public Health, Univ. of Michigan, Ann Arbor.* (Pathol.)

762. Ketoglutaric acid carboxylase in higher plants. OTTO SCHALES, SELMA S. SCHALES* AND GAYLE M. SCHWARZENBACH.* *Chemical Research Lab., Alton Ochsner Med. Fndn., and Dept. of Biochemistry, Tulane Univ. School of Medicine, New Orleans.*

FRIDAY, APRIL 21, 9:00 A.M.

Oxidative Enzymes

ROOM S

T. R. Hogness, *Chairman*

763. Reaction mechanism of diamine oxidase (histaminase). HERBERT TABOR. *Natl. Insts. of Health, Bethesda, Md.* (Pharmacol.)

764. Isolation of L-amino acid oxidase from moccasin venom. THOMAS P. SINGER, EDNA B. KEARNEY* AND EVELYN A. HEISLER.* *Dept. of Biochemistry, Western Reserve Univ. School of Medicine, Cleveland, Ohio.*

765. Reversible changes in the L-amino acid oxidase molecule. EDNA A. KEARNEY* AND THOMAS P. SINGER. *Dept. of Biochemistry, Western Reserve Univ. School of Medicine, Cleveland, Ohio.*

766. Composition of rat liver xanthine oxidase and its inhibition by tetraethylthiuramdisulfide (antabuse). W. W. WESTERFELD, DAN A. RICHERT* AND RAYMOND VANDERLINDE.* *Dept. of Biochemistry, Syracuse Univ. College of Medicine, Syracuse, N. Y.*

767. A modified method of estimation of xanthine oxidase activity in tissue homogenates. J. C. VAN METER AND J. J. OLESON (introduced by I. S. DANIELSON). *Lederle Labs. Division,*

American Cyanamid Company, Pearl River, N. Y.

768. Specificity of xanthine oxidase. DORIS C. LORZ* AND G. H. HITCHINGS. *Wellcome Research Labs., Tuckahoe, N. Y.*

769. Xanthine metabolism in the rat. J. N. WILLIAMS, JR.,* PHILIP FEIGELSON* AND C. A. ELVEHJEM. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

770. Cytochrome c reductase (DPN) of heart muscle particles. E. C. SLATER (introduced by S. OCHOA). *Australian Natl. Univ. Fellow, Molteno Inst., Univ. of Cambridge, England.*

771. Oxidation of triphosphopyridine nucleotide by plant enzymes. ERIC E. CONN* AND BIRGIT VENNESLAND. *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

772. Oxidation by cytochrome oxidase of reduced cytochrome c. W. W. WAINIO, P. PERSON, S. J. COOPERSTEIN AND B. EICHEL (introduced by R. H. BARNES). *Bureau of Biological Research, Rutgers Univ., New Brunswick, N. J., and Dept. of Anatomy, Western Reserve Univ. School of Medicine, Cleveland, Ohio.*

773. Solubilization and purification of cytochrome oxidase from heart muscle extract. E. LUCILE SMITH* AND ELMER STOTZ. *Dept. of Biochemistry, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

774. Reaction of ferrocytochrome-c with peroxidases and peroxides. BRITTON CHANCE (introduced by J. M. BUCHANAN). *Johnson Research Fndn., Univ. of Pennsylvania, Philadelphia.*

FRIDAY, APRIL 21, 1:30 P.M.

Chemistry and Metabolism of Proteins

ROOM B

Hans Neurath, *Chairman*

775. Effect of body exposure to x-rays on rate of incorporation of C^{14} carboxyllabeled alanine into mouse protein. L. H. HEMPELMANN, S. CARR, I. D. FRANTZ, JR., R. MASTERS AND E. LAMDIN (introduced by LEWIS L. ENGEL). *Med. Labs. of the Collis P. Huntington Memorial Hospital of Harvard Univ., Boston, Mass.*

776. Liberation of amino acids in human seminal fluid. FRANK LUNDQUIST (introduced by H. A. LARDY). *Inst. of Legal Medicine, Univ. of Copenhagen, Copenhagen, Denmark.*

777. Peptides released in the enzymatic conversion of ovalbumin to plakalbumin. C. A. VILLEE, K. LINDERSTROM-LANG* AND M. OTTESEN.* *Chemical Dept., Carlsberg Lab., Copenhagen, Denmark.*

778. Effect of exclusion of oxygen from the hydrolysis by Blau's method upon detection of thyroxine from thyroglobulin. MARSHALL E. DEUTSCH (introduced by ISIDOR GREENWALD). *Dept. of Chemistry, New York Univ. College of Medicine, New York City.*

779. Photochemical oxidation of amino acids, β-lactoglobulin and lysozyme in the presence of methylene blue. LEOPOLD WEIL AND JEANNE MAHER.* *Eastern Regional Research Lab., Philadelphia, Pa.*

780. Radioactive tobacco mosaic virus. ROBERT V. LASHBROOK* AND HUBERT S. LORING. *Dept. of Chemistry and School of Medicine, Stanford Univ., Stanford, Calif.*

781. Isolation of crystalline conalbumin. ROBERT C. WARNER AND IONE WEBER.* *Dept. of Chemistry, New York Univ. College of Medicine, New York City.*

782. Preparation of thymus nucleohistone in native form. GERALD ORGEL* AND KURT G. STERN. *Dept. of Chemistry, Polytechnic Inst. of Brooklyn, Brooklyn, N. Y.*

783. Proteins of cellular nuclei. R. DUNCAN DALLAM, WILLIAM R. KIRKHAM, TUNG-YUE WANG, LLOYD E. THOMAS AND DENNIS T. MAYER (introduced by SAMUEL BRODY). *Depts. of Biochemistry and Agricultural Chemistry, Univ. of Missour, Columbia.*

784. Amino acids in two tuberculin protein fractions. FLORENCE B. SEIBERT AND PAUL W. KENT.* *Henry Phipps Inst., Univ. of Pennsylvania, Philadelphia, and Dept. of Chemistry, Univ. of Birmingham, England.*

785. Purification and properties of relaxin. EDWARD H. FRIEDEN* AND F. L. HISAW. *Biological Labs., Harvard Univ., Cambridge, Mass.* (Physiol.)

FRIDAY, APRIL 21, 1:30 P.M.

Metabolism of Purines and Pyrimidines

ROOM C

George B. Brown, *Chairman*

786. Purine metabolism in rat liver homogenates. DAN A. RICHERT, AND W. W. WESTERFELD. *Dept. of Biochemistry, Syracuse Univ. College of Medicine, Syracuse, N. Y.*

787. Precursors of purines. MARTIN P. SCHULMAN,* JOHN M. BUCHANAN, AND CHARLES S. MILLER.* *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

788. Accumulation of 5(4)-amino-4(5)-imidazolecarboxamide in relation to sulfonamide bacteriostasis and purine metabolism in *Escherichia coli*. JOSEPH S. GOTS (introduced by CECELIA RIEGEL), *Dept. of Bacteriology, School*

of Medicine, Univ. of Pennsylvania, Philadelphia.

789. Mechanims of biosynthesis of purine. G. ROBERT GREENBERG (introduced by HARLAND G. WOOD). *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

790. Cytosine deaminase of yeast. JACOB KREAM AND ERWIN CHARGAFF. *Dept. of Biochemistry, College of Physicians and Surgeons, Columbia Univ., New York City.*

791. Metabolism of purines and pyrimidines in growing yeast. MARY EDMONDS,* ADELAIDE M. DELLUVA* AND D. WRIGHT WILSON. *Dept. of Physiological Chemistry, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

792. Transfer of purines and pyrimidines from bacterial host to bacteriophage progeny. J. MICHAEL BARRY, MIRIAM GOLLUB BANKS AND ARTHUR L. KOCH (introduced by E. A. EVANS, JR.). *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

793. Role of serine and acetate in uric acid formation. DAVID ELWYN* AND DAVID B. SPRINSON. *Dept. of Biochemistry, Columbia Univ., New York City.*

794. Pool of miscible uric acid in the gouty human. JEAN D. BENEDICT*, PETER H. FORSHAM,* MARCEL ROCHE,* SIDNEY SOLOWAY* AND DEWITT STETTEN, JR. *Division of Nutrition and Physiology, Public Health Research Inst. of the City of New York, the Med. Clinic, Peter Bent Brigham Hospital, and the Dept. of Medicine, Harvard Med. School, Boston, Mass.*

795. Effect of colchicine and cortisone on uric acid metabolism in gout. CHARLES BISHOP, WILLIAM GARNER AND JOHN H. TALBOTT (introduced by WILSON D. LANGLEY). *Dept. of Medicine, Univ. of Buffalo Med. School, and Buffalo General Hospital, Buffalo, N. Y.*

796. Intracellular localization of uricase activity. ARNOLD H. SCHEIN, ESTELLE PODBER AND ALEX. NOVIKOFF (introduced by H. B. PIERCE). *Dept. of Biochemistry and Pathology, Univ. of Vermont College of Medicine, Burlington.*

797. Adenine intoxication in relation to in vivo formation and deposition of 2,8-dioxyadenine in renal tubules. F. S. PHILIPS, J. B. THIERSCH* AND A. BENDICH.* *Divisions of Experimental Chemotherapy and of Protein Chemistry, Sloan-Kettering Inst. for Cancer Research, New York City.* (Pharmacol.)

FRIDAY, APRIL 21, 1:30 P.M.

Carbohydrate Metabolism II

ROOM E

A. Baird Hastings, *Chairman*

798. Effect of diet upon urinary amylase excretion. BENJAMIN W. SMITH* AND JOSEPH H. ROE. *Dept. of Biochemistry, School of Medicine, George Washington Univ., Washington, D. C.*

799. Sex differences in response to alloxan. ELIOT F. BEACH, PHOEBE J. BRADSHAW* AND N. R. BLATHERWICK. *Biochemical Lab., Metropolitan Life Insurance Co., New York City.*

800. Hormonal control of the combination of insulin with isolated muscle. W. C. STADIE, NIELS HAUGAARD* AND JULIAN B. MARSH.* *John Herr Musser Dept. of Research Medicine, Univ. of Pennsylvania, Philadelphia.*

801. Studies on carbohydrate metabolism of the rabbit ileum. P. R. SALERNO,* L. G. ABOOD* AND J. M. COON. *Toxicity Lab. and Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.* (Pharmacol.)

802. Phosphogluconic acid metabolism. B. L. HORECKER. *Natl. Insts. of Health, Bethesda, Md.*

803. A method for the estimation of 2-keto-hexonic acids. SEYMOUR S. COHEN AND MARY C. LANNING.* *Children's Hospital of Philadelphia and Dept. of Physiological Chemistry, Univ. of Pennsylvania School of Medicine, Philadelphia.*

804. Tracer studies on the biosynthesis of glucuronic acid. E. H. MOSBACH* AND C. G. KING. *Dept. of Chemistry, Columbia Univ., New York City.*

805. Isolation of β-glucuronidase of calf spleen and factors influencing its activity. PETER BERNFELD* AND WILLIAM H. FISHMAN. *Depts. of Surgery and Biochemistry, Tufts College Med. School, Boston, Mass.*

806. Studies on the orcinol method for determining pentoses. GAIL LORENZ MILLER, ELIAZBETH ESHELMAN MILLER* AND RICHARD H. GOLDER.* *Inst. for Cancer Research and Lankenau Hospital Research Inst., Philadelphia, Pa.*

807. An improved micro-method for sugars using direct colorimetry of ferricyanide. GEORGE O. BURR AND T. TANIMOTO.* *Dept. of Physiology and Biochemistry, Experiment Station, H.S. P.A., Honolulu, T. H.*

FRIDAY, APRIL 21, 1:30 P.M.

Enzymes in General

ROOM S

A. K. Balls, *Chairman*

808. Effect of beryllium on certain enzymes. FRIEDRICH W. KLEMPERER. *Dept. of Biochemistry, Trudeau Fndn. for Clinical and Experimental Study of Pulmonary Disease, Trudeau, N. Y.*

809. Thionase activity. FRANCIS BINKLEY. *Univ. of Utah College of Medicine, Salt Lake City.*

810. Synthesis of visual pigments from the retinenes. GEORGE WALD AND PAUL K. BROWN (introduced by J. T. EDSALL). *Biological Labs., Harvard Univ., Cambridge, Mass.*

811. Synthesis of rhodopsin from vitamin A_1. RUTH HUBBARD AND GEORGE WALD (introduced by J. T. EDSALL). *Biological Labs., Harvard Univ., Cambridge, Mass.*

812. Hydrolysis of sulfated mucopolysaccharides by testicular hyalurinidase. KARL MEYER AND MAURICE M. RAPPORT.* *Dept. of Medicine, Columbia Univ. College of Physicians and Surgeons, New York City.*

813. Correlation of reductimetric and turbidimetric methods of hyaluronidase assay. MAURICE M. RAPPORT,* KARL MEYER AND ALFRED LINKER.* *Dept. of Medicine, Columbia Univ. College of Physicians and Surgeons, New York City.*

814. Hyaluronidase in tumor tissue. DAVID GLICK, LAWRENCE B. KIRILUK,* ERICK Y. HAKANSEN* AND ARNOLD J. KREMEN.* *Depts. of Physiological Chemistry and Surgery, Univ. of Minnesota Med. School, Minneapolis.*

815. Response of the serum level of hyaluronidase inhibitor and mucoprotein to stress. THOMAS A. GOOD,* ROBERT A. GOOD,* VINCENT C. KELLEY* AND DAVID GLICK. *Depts. of Physiological Chemistry and Pediatrics, Univ. of Minnesota Med. School, Minneapolis.*

816. Observations on a plant amide enzyme system. P. K. STUMPF (introduced by H. A. BARKER). *Division of Plant Nutrition, Univ. of California, Berkeley.*

817. The α-glucosaminidase activity of partially purified testicular extract. SAUL ROSEMAN* AND ALBERT DORFMAN. *Dept. of Pediatrics, Univ. of Chicago, Chicago, Ill.*

818. Differential heat, alkali and trypsin inactivation of pancreatic lipase. PAUL J. FODOR (introduced by HAROLD P. MORRIS). *Natl. Cancer Inst., Natl. Insts. of Health, Bethesda, Md.*

819. Use of thermistors in twin calorimetry for enzyme reactions. F. C. HOLLER,* D. VENABLE* AND C. L. GEMMILL. *Dept. of Pharmacology, Univ. of Virginia Med. School, Charlottesville.* (Pharmacol.)

Papers Read by Title

820. Effect of incubation on the cholesterol content of rat liver homogenate. W. P. ADAMS,* L. I. RICE,* M. C. SCHOTZ,* G. F. JACOBSON* AND W. MARX. *Dept. of Biochemistry, Univ. of Southern California School of Medicine, Los Angeles.*

821. Phenylalanine requirements of children. ANTHONY A. ALBANESE, REGINALD A. HIGGONS,* BETTY VESTAL* AND LOUKIA STEPHANSON.* *Nutritional Research Lab., St. Luke's Hospital, New York City.*

822. Decarboxylation of cysteic acid. JAMES C. ANDREWS AND JOHN F. R. KUCK.* *Dept. of Biological Chemistry and Nutrition, School of Medicine, Univ. of North Carolina, Chapel Hill.*

823. Quantitative micro determination of thiosulfate. KAZKO ARAI, FRANK L. ALDRICH AND JOSEPH H. GAST (introduced by HOWARD B. LEWIS). *Dept. of Biochemistry, Baylor Univ. College of Medicine, Houston, Texas.*

824. Chromatographic fractionation of steroids of blood and adrenal tissue. REGINALD M. ARCHIBALD AND JACQUE GENEST.* *Hospital of the Rockefeller Inst. for Med. Research, New York City.*

825. Further properties of a tuberculostatic fraction of human plasma. DONALD E. BOWMAN. *Dept. of Biochemistry and Pharmacology, Indiana Univ. School of Medicine, Indianapolis.*

826. Fatty acids as biotin substitutes for *Leuconostoc*. WARNER W. CARLSON, VIRGINIA WHITESIDE-CARLSON AND KATHERINE KOSPETOS (introduced by EMMETT B. CARMICHAEL). *Biochemistry Dept., Med. College of Alabama, Birmingham.*

827. Succinic dehydrogenase-cytochrome c link in heart muscle succinoxidase. HAROLD W. CLARK (introduced by ELMER STOTZ). *Dept. of Biochemistry, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

828. Neutral mucopolysaccharides from various animal tissues. ZACHARIAS DISCHE AND MARTHA OSNOS.* *Dept. of Biochemistry, College of Physicians and Surgeons, Columbia Univ., New York City.*

829. Factors affecting the acetylcholine (ACh) found in rat brain. K. A. C. ELLIOTT AND NORA HENDERSON.* *Montreal Neurological Inst., McGill Univ., Montreal, Que., Canada.*

830. Vitamin E and hepatic necrosis. MARIANNE GOETTSCH. *Dept. of Chemistry and Nutrition, School of Tropical Medicine, Univ. of Puerto Rico, San Juan, P. R.*

831. Effect of anionic and cationic agents on urease. ROBERT L. GOLBY* AND GRANVIL C. KYKER. *Dept. of Biological Chemistry and Nutrition, School of Medicine, Univ. of North Carolina, Chapel Hill.*

832. Inhibitory effect of beef extract and 2-methylthioadenine on the growth of typhoid bacillus. G. H. HITCHINGS, G. B. ELION* AND M. B. SHERWOOD.* *Wellcome Research Labs., Tuckahoe, N. Y.*

833. Presence in wheat germ oil of factors capable of affecting endocrine metabolism I. EZRA LEVIN AND JOHN F. BURNS (introduced by B.

CONNOR JOHNSON). *VioBin Labs., Monticello, Ill.*

834. Serum proteins and experimental liver damage in the rabbit. MILTON GJELHAUG LEVINE, ROBERT E. HOYT AND ANITA A. SURAN (introduced by R. J. WINZLER). *Inst. of Experimental Medicine, College of Med. Evangelists, Los Angeles.*

835. Acetylation of p-amino benzoate and related compounds by the rabbit. M. F. MASON, GUS CASTEN* AND ALLAN LINDSAY.* *Parkland Hospital and Southwestern Med. School, Univ. of Texas, Dallas.*

836. Plasma growth and inhibitory factors for the malarial parasite (*Plasmodium knowlesi*). RALPH W. McKEE AND QUENTIN M. GEIMAN.* *Dept. of Biological Chemistry, Harvard Med. School, and Dept. of Tropical Public Health, Harvard School of Public Health, Boston.*

837. Nitrate and ammonia assimilation in plants. JULIUS L. MENDEL AND DONALD W. VISSER (introduced by R. J. WINZLER). *Dept. of Biochemistry and Nutrition, Univ. of Southern California School of Medicine, Los Angeles.*

838. Sedimentation and diffusion of *E. coli* bacteriophage T_6. FRANK W. PUTNAM AND EUGENE GOLDWASSER.* *Dept. of Biochemistry, Univ. of Chicago, Chicago, Ill.*

839. Physiopathology of intermediary carotene metabolism in animal organism. STELIOS C. SAMARAS, WILLIAM REALS AND DANIEL HINGERTY (introduced by VICTOR E. LEVINE). *Depts. of Biological Chemistry and Nutrition, and Pathology, Creighton Univ. School of Medicine, Omaha, Nebr.*

840. Preparation of a soluble, purified succinic dehydrogenase. CHARLES R. SCOTT (introduced by ELMER STOTZ). *Dept. of Biochemistry, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

841. Ultraspectrophotometrical studies of irradiated mouse tumors. M. SPIEGEL-ADOLF AND M. E. SANO.* *Dept. of Colloid Chemistry and Tissue Culture, Temple Univ. School of Medicine, Philadelphia, Pa.*

842. Photosynthesis studies with isotopic CO_2. HARLAND G. WOOD, GEORGE O. BURR AND CONSTANCE E. HARTT.* *Dept. of Biochemistry, School of Medicine, Western Reserve Univ., Cleveland, Ohio, and Experiment Station, H.S.P.A., Honolulu.*

843. Mechanism of oxidative deamination. E. A. ZELLER, G. A. FLEISHER AND D. C. UTZ (introduced by M. H. POWER). *Division of Biochemistry, Mayo Fndn., Rochester, Minn.*

THE AMERICAN SOCIETY FOR PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS

Fortieth Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Autonomic Agents

ROOM D

G. K. Moe, *Chairman*

844. Comparison of seven vaso-pressor compounds. LLOYD D. SEAGER AND WILLIAM WEISS.* *Dept. of Physiology and Pharmacology, Univ. of Arkansas, Little Rock, and Dept. of Anesthesiology, Woman's Med. College of Pennsylvania, Philadelphia.*

845. Actions of certain sympathomimetic amines on the excised, perfused guinea pig lung. ENID A. NEIDLE,* CHARLES M. GRUBER AND JOAN E. COPELAND.* *Dept. of Pharmacology, Jefferson Med. College, Philadelphia, Pa.*

846. Relation between chemical constitution and bronchodilator activity of sympathomimetic amines. C. A. ROSS,* W. S. WALLER* AND K. H. BEYER. *Dept. of Pharmacology, Med. Research Division, Sharp and Dohme, Inc., Glenolden, Pa.*

847. Effect of certain compounds on biological inactivation of epinephrine. EDWARD LARSON AND JOSEPH P. ADAMS, JR.* *Dept. of Physiology and Pharmacology, Univ. of Miami, Med. Research Unit at Veterans' Hospital, Coral Gables, Fla.*

848. Effect of epinephrine on intestinal volume. A. E. LIVINGSTON. *Dept. of Pharmacology, Temple Univ. School of Medicine, Philadelphia, Pa.*

849. Sympathetic ganglionic stimulant drugs. S. LOEWE, L. S. GOODMAN AND SUSANNE L. PUTTUCK.* *Dept. of Pharmacology, Univ. of Utah College of Medicine, Salt Lake City.*

850. Blockade of epinephrine-induced cardioacceleration in the frog. MARK NICKERSON AND GEORGE M. NOMAGUCHI.* *Dept. of Pharmacology, Univ. of Utah College of Medicine, Salt Lake City.*

851. Vasomotor and gastrointestinal studies using diparcol. C. KEITH LYONS AND BOYD H. METCALF (introduced by KEITH S. GRIMSON). *Dept. of Surgery, Duke Univ. School of Medicine, Durham, N. C.*

852. Blockade of epinephrine-induced hyperglycemia. STEWART C. HARVEY,* MARK NICKERSON AND KATHRYN STOVER.* *Dept. of Pharmacology, Univ. of Utah College of Medicine, Salt Lake City.*

853. Effect of benzodioxane (933 F) on hypertension due to circulating nor-epinephrine (in man). MARCEL GOLDENBERG AND HENRY ARANOW, JR. (introduced by H. B. VAN DYKE). *Dept. of Medicine, Columbia Univ. College of Physicians and Surgeons, New York City.*

854. Acute pharmacology of dimethyl-2-chloro-2-phenyl-ethylamine. FRANK C. FERGUSON, JR. (introduced by W. CLARKE WESCOE). *Dept. of Pharmacology, Cornell Univ. Med. College, New York City.*

855. Electrical action of adrenergic blocking agents. T. C. BARNES. *Dept. of Pharmacology, Hahnemann Med. College and Hospital of Philadelphia, Philadelphia, Pa.*

856. Effect of sympathomimetic amines and sympatholytics on blood sugar and lactate of the rat. SYDNEY ELLIS AND HILTON L. ANDERSON.* *Dept. of Pharmacology, Temple Univ. School of Medicine, Philadelphia, Pa. and Dept. of Physiology and Pharmacology, Duke Univ. School of Medicine, Durham, N. C.*

TUESDAY, APRIL 18, 9:00 A.M.

Antihistaminic Agents

ROOM 9

H. L. Dickison, *Chairman*

857. Method of sensitizing guinea pigs to horse serum that yields, after challenging of the animals, a 100% lethal response. WALTER E. BARRETT (introduced by B. N. CRAVER). *Research Dept., Division of Macrobiology, Ciba Pharmaceutical Products, Inc., Summit, N. J.*

858. Effect of long-acting antihistaminic drugs on the capillary bed. THOMAS J. HALEY AND MARGARET ANDEM.* *School of Medicine, Univ. of California at Los Angeles.*

859. In vitro antihistamine and anti-acetylcholine activity of several antihistamines. S. MAR-

GOLIN, A. MAKOVSKY AND R. TISLOW (introduced by H. B. HAAG). *Biological Research Labs., Schering Corp., Bloomfield, N. J.*

860. In vivo antihistamine activity of several antihistamines. R. TISLOW, S. MARGOLIN, M. T. SPOERLEIN AND E. VOLAGE (introduced by H. B. HAAG). *Biological Research Labs., Schering Corp., Bloomfield, N. J.*

861. Studies on the pharmacology of Dramamine. LEONARD B. GUTNER,* WILBUT J. GOULD* AND ROBERT C. BATTERMAN. *Dept. of Therapeutics, New York Univ. College of Medicine, New York City.*

862. Effect of certain dialkyl substituted aminoalkyl bearing compounds on apormorphine-induced emesis. JOSEPH M. WHITE,* DANIEL FREEDMAN,* E. L. MCCAWLEY AND WILLIAM D. GRAY.* *Dept. of Pharmacology, Yale Univ. School of Medicine, New Haven, Conn.*

TUESDAY, APRIL 18, 9:00 A.M.

General Pharmacology

ROOM 1

G. H. Acheson, *Chairman*

863. Actions of 1-hydrazinophthalazine (C-5968) on vasomotor reflexes and hypertension in dogs and man. K. S. GRIMSON, J. R. CHITTUM* AND B. H. METCALF.* *Dept. of Surgery, Duke Univ. School of Medicine, Durham, N. C.*

864. Effect of 1-hydrazinophthalazine (C-5968) on cardiovascular system of unanesthetized dogs. HARRY A. WALKER, SUSANNE WILSON* AND ARTHUR P. RICHARDSON. *Dept. of Pharmacology, Emory Univ. School of Medicine, Emory University, Ga.*

865. Some pharmacological properties of 1-hydrazinophthalazine, a hypotensive agent. B. N. CRAVER AND F. F. YONKMAN. *Research Dept., Division of Macrobiology, Ciba Pharmaceutical Products, Inc., Summit, N. J.*

866. Pharmacology of a polymer with long acting vasodepressor properties. PETER B. DEWS* AND EDWIN J. DE BEER. *Wellcome Research Labs., Tuckahoe, N. Y.*

867. Relation of sulfhydryl and disulfide groups in ferritin to its vasodepressor activity. ABRAHAM MAZUR AND EPHRAIM SHORR. *Dept. of Medicine, Cornell Univ. Med. College and New York Hospital, New York City.* (Biochem.)

868. Technique for the screening in man of bronchodilating drugs. SIDNEY DANN* AND ROBERT C. BATTERMAN. *Dept. of Therapeutics, New York Univ. College of Medicine, New York City.*

869. Study of the fate of sodium-5-iodo-2-thiouracil. ALBERT J. PLUMMER (introduced by F. F. YONKMAN). *Research Dept., Division of Macrobiology, Ciba Pharmaceutical Products, Inc, Summit, N. J.*

870. Thiouracil derivatives in alloxan diabetes. STERLING H. FLY, JR.,* HARVEY HAYS, JR.* AND G. A. EMERSON. *Univ. of Texas Med. Branch, Galveston.*

871. A quantitative chromatographic method, applicable to body fluids, for the determination of 2-thiouracil and 5-iodo-2-thiouracil singly or in mixtures. ANTHONY C. SHABICA AND EDWARD SOLOOK (introduced by E. OPPENHEIMER). *Research Dept., Division of Development, Ciba Pharmaceutical Products, Inc., Summit, N. J.*

TUESDAY, APRIL 18, 1:30 P.M.

Autonomic Agents

ROOM D

A. M. Lands, *Chairman*

872. Vasopressor action of pilocarpine. MARY A. ROOT (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

873. Pharmacologic significance of m-hydroxyphenyl trimethylammonium ion. WALTER F. RIKER, JR. AND W. CLARKE WESCOE. *Dept. of Pharmacology, Cornell Univ. Med. College, New York City.*

874. Cholinergic action of alkyl pyrophosphoramides. KENNETH P. DUBOIS AND JOHN DOULL.* *Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

875. Cholinergic effects of F 2268. EDWARD A. CARR, JR.,* MAX KARSCH* AND DOUGLAS S. RIGGS. *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

876. Dosage–reversal of the effects of acetylcholine and of adrenaline, as observed in the submaxillary salivary gland of the cat. G. W. STAVRAKY AND A. R. GRAHAM.* *Dept. of Physiology, Faculty of Medicine, Univ. of Western Ontario, London, Canada.*

877. Studies on permeability: effect of physostigmine and acetyl choline on the permeability of rabbit, cat and dog erythrocytes to sodium and potassium. W. C. HOLLAND* AND MARGARET E. GREIG. *Dept. of Pharmacology, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

878. Role of specific and non-specific cholinesterase in spontaneous contractions of the isolated ileum. GEORGE B. KOELLE, ETHOL S. KOELLE* AND JONAS S. FRIEDENWALD.* *Wilmer Ophthalmological Inst., Johns Hopkins Univ. and Hospital, Baltimore, Md.*

879. Comparison of certain ganglionic blocking agents with tetraethylammonium bromide. JAMES L. MORRISON, CORNEILLE HEYMANS,* HARRY A. WALKER AND ARTHUR P. RICHARDSON. *Dept. of Pharmacology, Emory Univ. School of Medicine, Emory University, Georgia.*

880. Antagonism between acetylcholine and tetraethylammonium in normal and denervated ganglia. G. K. MOE AND H. KONZETT.* *Sandoz Labs., Basel, Switzerland.*

881. Antagonism of the cholinergic triad by β-diethylaminoethyl xanthene-9-carboxylate methobromide (Banthine bromide). W. E. HAMBOURGER, DONALD L. COOK* AND D. M. GREEN. *Pharmacology Dept., Division of Biological Research, G. D. Searle and Co., Chicago, Ill.*

882. Effect of denervation on the motility and response to atropine of the terminal ileum and colon of the dog. GRACE W. GRAY,* R. M. WHITROCK* AND M. H. SEEVERS. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

883. Parasympathetic blockade by alpha-alpha-diphenyl-gamma-dimethylamino valeramide HCl. RALPH J. CAZORT (introduced by KLAUS R. UNNA). *Dept. of Pharmacology, University of Illinois College of Medicine, Chicago.*

884. Studies on the metabolism of nicotine using spectrophotometric and radioactive techniques. AARON GANZ* AND F. E. KELSEY. *Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

TUESDAY, APRIL 18, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

TUESDAY, APRIL 18, 1:30 P.M.

General Anesthetics

ROOM 9

H. K. Beecher, *Chairman*

885. A rapid and simple method for carbon dioxide analysis in anesthetic atmospheres. ANN BARDEEN* AND O. S. ORTH. *Depts. of Anesthesia and Pharmacology, Univ. of Wisconsin Med. School, Madison.*

886. Effects of depth of anesthesia on peripheral circulation. S. G. HERSHEY* AND E. A. ROVENSTINE. *Dept. of Anesthesiology, New York University-Bellevue Med. Center, New York City.*

887. Prolongation of thiopental anesthesia by anoxia. R. C. PETERSON,* F. E. SHIDEMAN AND LINARES B. JOHNSON.* *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

888. Effect of localization of pentothal in fat on its duration of action. LESTER C. MARK,* ELEANORE BERNSTEIN* AND BERNARD B. BRODIE. *Depts. of Anesthesiology and Biochemistry, New York Univ. College of Medicine and Research Service, Goldwater Memorial Hospital, New York City.*

889. Studies on renal function during various stages of anesthesia produced by thiopental in dogs. ARNOLD H. MALONEY, WALTER M. BOOKER, JAMES R. TUREMAN* AND CLAUDIA M. RATLIFF.* *Dept. of Pharmacology, Howard Univ. Med. School, Washington, D. C.*

890. Potentiating effect of glucose and its metabolic products on barbiturate anesthesia. P. D. LAMSON, MARGARET E. GREIG, AND B. H. ROBBINS. *Dept. of Pharmacology, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

891. Kidney function and ultra-short acting barbiturates. R. K. RICHARDS, K. E. KUETER* AND J. D. TAYLOR.* *Dept. of Pharmacology, Abbott Labs., North Chicago, Ill.*

892. Metabolism of radioactive S^{35} thiopental (pentothal) in the rat and monkey. J. D. TAYLOR,* R. K. RICHARDS AND D. L. TABERN.* *Depts. of Pharmacology and Special Research, Abbott Research Labs., North Chicago, Ill.*

TUESDAY, APRIL 18, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

TUESDAY, APRIL 18, 1:30 P.M.

General Pharmacology

ROOM 1

A. A. Hellbaum, *Chairman*

893. Absorption, plasma levels, and excretion of mescaline in the dog. J. COCHIN,* L. A. WOODS AND M. H. SEEVERS. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

894. Fate of mescaline in serum, plasma and blood. L. A. WOODS, J. COCHIN* AND M. H. SEEVERS. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

895. Metabolism of tetraethylthiuram disulfide (Antabuse). WIKTOR W. NOWINSKI, THOMAS P. EDWARDS* AND JAMES P. ELLIS.* *Dept. of Neuropsychiatry and Tissue Culture Lab., Univ. of Texas Med. Branch, Galveston.* (Physiol.)

896. Effect of tetraethylthiuram disulfide (Antabuse) on metabolism of isopropyl alcohol. R. W. SCHAFFARZICK (introduced by P. J. HANZLIK). *Dept. of Pharmacology and Therapeutics, Stanford Univ. School of Medicine, San Fracisco, Calif.*

897. Studies on the pharmacology of tetraethylthiuram disulfide (Antabuse) and the 'Antabuse-Alcohol' syndrome in animals and man. GEORGE P. CHILD, EUGENE BARRERA,* WALTER OSINSKI,* ZACK RUSS* AND GEORGE HEMSTEAD.* *Depts. of Physiology and Pharmacology, Neurology and Psychiatry and Medicine, Albany Med. College, Albany N. Y.*

898. 'Benemid' (p-(di-n-propylsulfamyl)-benzoic acid)—an anticatabolite: its pharmacological properties. KARL H. BEYER, VIRGIL D. WIEBELHAUS,* HORACE F. RUSSO,* HAROLD M. PECK* AND SAMUEL E. MCKINNEY.* *Dept. of Pharmacology, Med. Research Division, Sharp & Dohme, Inc., Glenolden, Pa.*

899. 'Benemid' (p-(di-n-propylsulfamyl)-benzoic acid)—an anticatabolite: its estimation in body fluids. ELIZABETH K. TILLSON,* GRACE S. SCHUCHARDT,* ALICE A. PITT,* RICHARD W. GASS* AND KARL H. BEYER. *Dept. of Pharmacology, Med. Research Division, Sharp & Dohme, Inc., Glenolden, Pa.*

900. Effects of mercurial compounds on saccharase. G. L. GEMMILL AND E. M. BOWMAN.* *Dept. of Pharmacology, Univ. of Virginia Med. School, Charlottesville.*

901. Factors influencing bile flow in the dog. DONALD L. COOK,* DORIS A. BEACH,* ROBERT G. BIANCHI,* W. E. HAMBOURGER AND D. M. GREEN. *Pharmacology Dept., Division of Biological Research, G. D. Searle & Co., Chicago.*

902. Studies on the new 4-hydroxycoumarin anticoagulant no. 63. R. T. CAPPS,* W. D. BATTLE,* O. O. MEYER* AND O. S. ORTH. *Depts. of Pharmacology and Medicine, Univ. of Wisconsin Med. School, Madison.*

TUESDAY, APRIL 18, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

WEDNESDAY, APRIL 19, 9:00 A.M.

Cardiac Agents

ROOM D

F. E. Shideman, *Chairman*

903. Action of cardiac glycosides on experimental auricular flutter. A. FARAH AND T. LOOMIS. *Dept. of Pharmacology, Univ. of Washington School of Medicine, Seattle.*

904. Effects of procaine and diethylaminoethanol in auricular flutter in the dog. G. H. ACHESON AND BARBARA BROWN.* *Pharmacology Dept. Univ. of Cincinnati College of Medicine, Cincinnati, Ohio.*

905. Effects of procaine and diethylaminoethanol on auricle and ratio of ventricular rate to auricular rate in the dog. BARBARA BROWN (introduced by G. H. ACHESON). Pharmacology *Dept., Univ. of Cincinnati, College of Medicine, Cincinnati, Ohio.*

906. Effects of 3 halogenated ethyl amines on cardiac arrhythmias induced by epinephrine, nicotine, and cyclopropane. VICTOR A. DRILL AND HARRY W. HAYS.* *Dept. of Physiology and Pharmacology, Wayne Univ. College of Medicine, Detroit, Mich.*

907. Action of Neo-Coronaril, Erba, upon induced ventricular fibrillation. DONALD SLAUGHTER AND J. BELOGORSKY.* *Dept. of Physiology and Pharmacology, Univ. of South Dakota, Vermillion.*

908. Nomogram for cardiac synergism of calcium, potassium and digitalis bodies (in 'thera-

peutic' concentration). WILLIAM T. SALTER, BERNARD RUBIN* AND . ELIZABETH A. RUNELS.* *Labs. of Pharmacology and Toxicology, Yale Univ. School of Medicine, New Haven, Conn.*

909. Effects of ouabain on the coronary circulation and cardiac energetics. ROBERT G. PAGE, HERBERT WENDEL, WARNER B. SHELDON AND ELWOOD L. FOLTZ (introduced by CARL F. SCHMIDT). *Lab. of Pharmacology, Univ. of Pennsylvania, Philadelphia.*

910. Electrical and chemical activities of fibrillating denervated and innervated muscle deprived of Ca^{++}. A. R. MCINTYRE, A. L. DUNN* AND FENWORTH DOWNING.* *Dept. of Physiology and Pharmacology, Univ. of Nebraska College of Medicine, Omaha, Nebr.*

911. Local vs. systemic emetic action of digitalis glycosides in man. NATHANIEL T. KWIT,* WALTER MODELL AND HARRY GOLD. *Dept. of Pharmacology, Cornell Univ. Med. College, Cardiovascular Research Unit of Beth Israel Hospital, and Cardiac Service of Hospital for Joint Diseases, New York City.*

912. Quinidine in propylene glycol by intramuscular injection in man. JOSEPH GLUCK,* HARRY GOLD, WALTER MODELL, NATHANIEL KWIT,* SEYMOUR THICKMAN,* WILLIAM ZAHM* AND NYMAN BAKST.* *Dept. of Pharmacology, Cornell Univ. Med. College, Cardiovascular Research Unit of Beth Israel Hospital, and Cardiac Service of Hospital for Joint Diseases, New York City.*

WEDNESDAY, APRIL 19, 9:00 A.M.

Barbiturates and Anticonvulsants

ROOM 9

H. B. van Dyke, *Chairman*

913. Binding of barbiturates by rabbit tissue homogenates. LEO R. GOLDBAUM* AND PAUL K. SMITH. *Toxicology Section of Army Med. Dept., Research and Graduate School and Dept. of Pharmacology, George Washington Univ. School of Medicine, Washington, D. C.*

914. Pain relief with hypnotic doses of barbiturates. ARTHUR S. KEATS* AND HENRY K. BEECHER. *Anesthesia Lab. of Harvard Med. School at the Massachusetts General Hospital, Boston, Mass.*

915. Studies on the interaction of ureas and barbiturates in the potentiation of hypnosis. STATA NORTON* AND EDWIN J. DE BEER. *Wellcome Research Labs., Tuckahoe, N. Y.*

916. Anticonvulsant properties of the optical isomers of nirvanol and mesantoin. EWART A. SWINYARD, JACK E. ORR,* JOEL M. JOLLEY* AND LOUIS S. GOODMAN. *Depts. of Pharmacy, Pharmaceutical Chemistry, and Pharmacology, Univ. of Utah College of Pharmacy and College of Medicine, Salt Lake City.*

917. Effect of convulsant and anticonvulsant agents on the activity of cytochrome oxidase. CLARA TORDA AND HAROLD G. WOLFF. *New York Hospital, Kingsbridge Hospital (V.A.), and the Depts. of Medicine (Neurology) and Psychiatry, Cornell Univ. Med. College, New York City.*

918. Study of some antihistaminic drugs on the convulsive threshold and action of anticonvulsant drugs. G. M. EVERETT (introduced by R. K. RICHARDS). *Dept. of Pharmacology, Abbott Labs., North Chicago, Ill.*

919. Analeptic effect of succinate, malonate, citrate and acetate on pentobarbital sodium. JOSEPH P. ADAMS, JR.* AND EDWARD LARSON. *Dept. of Physiology and Pharmacology, Univ. of Miami Med. Research Unit at the Veterans' Hospital, Coral Gables, Fla.*

920. Pharmacological properties of 2,2-diethyl-1,3-propanediol (DEP). F. M. BERGER, B. J. LUDWIG* AND C. RUSSO.* *Wallace Labs., Inc., New Brunswick, N. J.*

921. Effects of parpanit, myanesin, and benzimidazole on properties of frog nerve. J. E. P. TOMAN, W. H. EVANS, S. C. HOUSTON, H. V. MILLER, J. M. NANCE AND B. K. WILSON (introduced by L. S. GOODMAN). *Depts. of Physiology and Pharmacology, Univ. of Utah College of Medicine, Salt Lake City.*

922. Electrical action of glyketal. R. BEUTNER. *Keeley Inst., Dwight, Ill.*

923. Mechanism of anticonvulsant action of 2-diethyl, 1,3-propanediol. I. H. SLATER, D. E. LEARY AND J. F. O'LEARY (introduced by S. W. CLAUSEN). *Dept. of Pharmacology and Toxicology and Dept. of Surgery, Division of Orthopedics, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.* (Biochem.)

WEDNESDAY, APRIL 19, 9:00 A.M.

General Pharmacology

ROOM 1

J. L. Morrison, *Chairman*

924. Chemotherapy of allergic arteritis in the rabbit. JAMES CLAMPIT (introduced by D. M. GREEN). *Dept. of Microbiology, Division of Biological Research, G. D. Searle & Co., Chicago, Ill.*

925. Rapidity of pituitary adrenocorticotropic

hormone (ACTH) release in response to stress. WILLIAM D. GRAY AND PAUL L. MUNSON (introduced by D. D. BONNYCASTLE). *Dept. of Pharmacology, Yale Univ., New Haven, Conn.*

926. A method of screening steroids on synovial membrane for possible anti-arthritic action. JOSEPH SEIFTER, DAVID H. BAEDER,* ALBERT J. BEGANY,* GEORGE ROSENKRANZ,* CARL DJERASSI,* JOHN PATAKI* AND STEPHEN KAUFMANN.* *Wyeth Inst. of Applied Biochemistry, Philadelphia, Pa. and Syntex, S. A., Mexico.*

927. Effects of desoxycorticosterone glycoside on cardiac and renal function. D. M. GREEN, A. D. JOHNSON,* W. C. BRIDGES,* J. H. LEHMANN* AND F. GRAY.* *Dept. of Medicine, Univ. of Washington School of Medicine, Seattle.*

928. Effects of steroids on the isolated frog's heart. BERNARD RUBIN (introduced by WILLIAM T. SALTER). *Labs. of Pharmacology and Toxicology, Yale Univ. School of Medicine, New Haven, Conn.*

929. Effect of diethylstilbestrol on respiration of cat heart tissue. JOSEPH F. REILLY (introduced by OSCAR BODANSKY). *Dept. of Pharmacology, Cornell Univ. Med. College, New York City.*

930. Studies on the 17-ketosteroid excretion, gonadotrophic inhibition and response of rat seminal vesicle following oral and parenteral administration of testosterone and testosterone propionate in different vehicles. BETTY M. SILVER, HERBERT S. KUPPERMAN AND RALPH A. POSTIGLIONE (introduced by ARTHUR C. DEGRAFF). *Dept. of Therapeutics, New York Univ. College of Medicine, New York City.*

931. Inhibition of Pasteur effect in brain by certain steroids. ALBERT WOLLENBERGER (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

932. Studies on cardiovascular actions of adenyl compounds. VIRGINIA L. SYDOW* AND RAYMOND P. AHLQUIST. *Dept. of Pharmacology, Univ. of Georgia School of Medicine, Augusta.*

933. Pharmacologic data on dl-2-amino-1-(*p*-methylphenyl)-propane. EDWARD MACKO,* EDWIN J. FELLOWS AND A. JAMES FENDRICK.* *Research Division, Smith, Kline and French Labs., Philadelphia, Pa.*

WEDNESDAY, APRIL 19, 1:30 P.M.

CNS Depressants, Analgesics, Antipyretics

ROOM D

C. R. Linegar, *Chairman*

934. Effect of morphine in vivo and in vitro on glycolysis of rat tissues. L. G. ABOOD (introduced by J. M. COON). *Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

935. Addiction liabilities of some drugs in the morphine series. H. F. FRASER,* H. G. FLANARY,* R. W. HOUDE* AND HARRIS ISBELL. *Research Division, USPHS Hospital, Lexington, Ky.*

936. Effect of D- and L- methadone on blood glucose and lactate of the dog. D. T. WATTS (introduced by C. L. GEMMILL). *Dept. of Pharmacology, Univ. of Virginia Med. School, Charlottesville.*

937. Analgesic action of 3-hydroxy-N-methyl morphinan hydrobromide (Nu-2206). LOWELL O. RANDALL AND G. LEHMANN.[1] *Pharmacology Dept., Hoffmann-La Roche Inc., Nutley, N. J.* (Biochem.)

938. Inhibition of the central nervous system produced by chronic cocaine intoxication. CARLOS GUTIERREZ-NORIEGA. *Dept. of Pharmacology, Universidad Mayor de San Marcos, Lima, Peru.*

939. Effect of certain analgesics upon intestine and uterine smooth muscle. CHARLES M. GRUBER, JR., CHARLES M. GRUBER AND KWANG SOO LEE.* *Dept. of Pharmacology, Jefferson Med. College, Philadelphia, Pa.*

940. Measurement of pathological pain in distinction to experimental pain. HENRY BEECHER, ARTHUR S. KEATS* AND FREDERICK C. MOSTELLER.* *Anesthesia Lab. of Harvard Med. School at Massachusetts General Hospital, Boston, and the Dept. of Social Relations, Harvard Univ., Cambridge, Mass.*

941. Chemical constitution and analgetic action. M. B. SLOMKA* AND F. W. SCHUELER. *Dept. of Pharmacology, State Univ. of Iowa College of Medicine, Iowa City.*

942. Measurement of pain threshold raising action of aspirin, codeine, and meperidine (Demerol). JAMES D. HARDY* AND MCKEEN CATTELL. *Depts. of Physiology and Pharmacology, Cornell Univ. Med. College, New York City.*

943. Effects on anaphylactic shock of salicylates, aminopyrine and other chemically and pharmacologically related compounds. MARK H. LEPPER,* BENJAMIN F. MILLER,* ESTON R. CALDWELL, JR.* AND PAUL K. SMITH. *Depts. of Medicine and Pharmacology, George Washington Univ. School of Medicine, Washington, D. C.*

944. Hypothermic agents: I. 4-amyl N-benzohydryl pyridinium bromide (B-45) and alpha naphthylmenthyl imidazoline (privine). JULINA GYLFE, ROBERT HENDRICKS, SIDNEY OCHS

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[1] Deceased.

AND H. L. WILLIAMS (introduced by C. C. PFEIFFER). *Dept. of Pharmacology, Univ. of Illinois College of Medicine, Chicago.*

945. Hypothermic agents: II. Effects on pyruvate utilization by brain. JAMES A. BAIN AND R. M. KOHLENBRENNER (introduced by C. C. PFEIFFER). *Depts. of Psychiatry and Pharmacology, Univ. of Illinois College of Medicine, Chicago.*

946. Hypothermic agents: III. Effect in man. CARL C. PFEIFFER, LOUIS SCHLANN* AND L. MEDUNA.* *Depts. of Pharmacology and Psychiatry, Univ. of Illinois College of Medicine, Chicago, and Manteno State Hospital, Chicago, Ill.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Cardiac Agents

ROOM 9

McK. Cattell, *Chairman*

947. Bioassay method for derivatives of *veratrum viride*. GEORGE L. MAISON AND J. W. STUTZMAN. *Dept. of Pharmacology, Boston Univ. School of Medicine, Boston, Mass.*

948. Hypotensive action of Veriloid, an extract of *veratrum viride*. J. W. STUTZMAN AND GEORGE L. MAISON. *Dept. of Pharmacology, Boston Univ. School of Medicine, Boston, Mass.*

949. Action of Veriloid upon the isolated mammalian heart. NORMAN S. STEARNS (introduced by J. W. Stutzman). *Dept. of Pharmacology, Boston Univ. School of Medicine, Boston, Mass.*

950. Veratrine-like action of the alkyl ethers of 3-hydroxy-2-phenyl-cinchoninic acid. DUNCAN A. HOLADAY (introduced by E. K. MARSHALL, JR.). *Dept. of Pharmacology and Experimental Therapeutics, Johns Hopkins Univ., Baltimore, Md.*

951. Pharmacology of khellin. KEITH F. KILLAM* AND EDWIN J. FELLOWS. *Research Division, Smith, Kline and French Labs., Philadelphia, Pa.*

952. Comparative pharmacology of khellin, visnagin and khellol glucoside. EDWIN J. FELLOWS, KEITH F. KILLAM,* JOHN J. TONER,* ROBERT A. DAILEY* AND EDWARD MACKO.* *Research Division, Smith, Kline and French Labs., Philadelphia, Pa.*

953. The veratrine-like properties of the alkaloidal fractions from *zygadenus venenosus*. SUMNER YAFFEE AND S. MORRIS KUPCHAN (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Med. School, Boston, Mass. and Dept. of Chemistry, Harvard Univ., Cambridge, Mass.*

954. Metabolic action of the veratrum alkaloids upon the tissue of the rat heart. MELCHIOR REITER (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

955. Action of epinephrine and veratramine upon heart rate and oxygen consumption in the heart-lung preparation of the dog. KURT KRAMER,* ULRICH LUFT* AND OTTO KRAYER. *Dept. of Pharmacology, Harvard Med. School, Boston, Mass. and School of Aviation Medicine, Randolph Field, Texas.*

956. Solanum alkaloids with antiaccelerator cardiac activity. OTTO KRAYER. *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Toxicity

ROOM 1

L. W. Hazelton, *Chairman*

957. Chromatographic method for the isolation of DDT and other chlorinated insecticides from fat. BERNARD DAVIDOW (introduced by ARNOLD J. LEHMAN). *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

958. A rapid micro method for the determination of DDT and Methoxychlor in animal tissues and fluids. CLAUDIA S. PRICKETT,* FRIEDA M. KUNZE* AND EDWIN P. LAUG. *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

959. Storage of Methoxychlor in the fat of the rat. FRIEDA M. KUNZE,* EDWIN P. LAUG AND CLAUDIA S. PRICKETT.* *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

960. Survey analyses of human milk and fat for DDT content. EDWIN P. LAUG, CLAUDIA S. PRICKETT* AND FRIEDA M. KUNZE.* *Division of Pharmacology, Food and Drug Administrarion, Federal Security Agency, Washington, D. C.*

961. The in vitro effect of DDT and its metabolites on rat heart succinoxidase. CARTER D. JOHNSTON (introduced by R. LORIMER GRANT). *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.* (Biochem.)

962. Factors affecting tissue distribution following oral ingestion of lipid soluble substances. JOHN P. FRAWLEY* AND O. GARTH FITZHUGH. *Division of Pharmacology, Food and Drug Ad-*

ministration, Federal Security Agency, Washington, D. C.

963. Absorption, distribution, and excretion of sodium fluoroacetate (1080) in rats. ERNEST C. HAGAN, L. L. RAMSEY AND GEOFFREY WOODARD (introduced by A. J. LEHMAN). *Division of Pharmacology and Division of Food, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

964. Treatment of sodium fluoroacetate (1080) poisoning in dogs. W. W. TOURTELLOTE* AND J. M. COON. *Toxicity Lab. and Dept. of Pharmacology, University of Chicago, Chicago, Ill.*

965. Water and electrolyte equilibria: factors in fluoroacetate poisoning. LINARES B. JOHNSON,* ALEXANDER KANDEL* AND MAYNARD B. CHENOWETH. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

966. Positive inotropic and other actions of fluoroacetate. MAYNARD B. CHENOWETH AND KOMOL PENGSRITONG.* *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

WEDNESDAY, APRIL 19, 7:00 P.M.

Biometrical Clinic. A Discussion of Practical Problems Submitted by Pharmacologists

ROOM D

Joint Session: The Biometric Society, Eastern North American Region, and the American Society for Pharmacology and Experimental Therapeutics

Chairman: EDWIN J. DE BEER, *The Wellcome Research Labs., Tuckahoe, N. Y.*

Discussants

1. C. I. BLISS. *Connecticut Agricultural Experimental Station, New Haven, Conn.*
2. W. G. COCHRAN. *The Johns Hopkins University, Baltimore, Md.*
3. FREDERICK MOSTELLER. *Harvard Univ., Cambridge, Mass.*
4. W. J. YOUDEN. *National Bureau of Standards, Washington, D. C.*

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Curare and Related Agents

ROOM D

A. R. MCINTYRE, *Chairman*

967. Curarimimetic activity of mono- and bis-(amino and ammonium-alkylamino)-benzoquinones. J. O. HOPPE, A. E. SORIA AND C. J. CAVALLITO (introduced by A. M. LANDS). *Sterling-Winthrop Research Inst., Rensselaer, N. Y.*

968. Histamine-like actions of curari on submaxillary glands of the cat. JOHN ABAJIAN* AND N. B. DREYER. *Depts. of Anesthesiology and Pharmacology, Univ. of Vermont, Burlington.*

969. Potentiation of curarizing action of diacetylcholine (succinylcholine) by aliphatic dicarboxylic acid aminoethyl amides. JULIO C. CASTILLO* AND EDWIN J. DE BEER. *Wellcome Research Labs., Tuckahoe, N. Y.*

970. Synthetic curare compounds. VI. Isomers of of n-methyltetrandine iodide. DAVID F. MARSH AND D. A. HERRING.* *Dept. of Pharmacology, West Virginia Univ. School of Medicine, Morgantown.*

971. Synthetic curare compounds. VII. N-methyltrilobine iodide and n-methylisotrilobine iodide. D. A. HERRING* AND DAVID F. MARSH. *Dept. of Pharmacology, West Virginia Univ. School of Medicine, Morgantown.*

972. Analysis of regression equations for curarizing agents in man. E. W. PELIKAN* AND K. R. UNNA. *Dept. of Pharmacology, Univ. of Illinois College of Medicine, Chicago.*

973. Comparative effects of repeated doses of curarizing agents in man. DAVID W. MACFARLANE* AND KLAUS R. UNNA. *Dept. of Pharmacology, Univ. of Illinois College of Medicine, Chicago.*

974. Antagonistic effects of pentamethylene-bis (trimethylammonium iodide) (C5) and of D-tubocurarine (dTC) on the action of decamethylene-bis(trimethylammonium bromide) (C10) in man. KLAUS R. UNNA AND MAX S. SADOVE.* *Dept. of Pharmacology, Univ. of Illinois College of Medicine, Chicago.*

975. Anti-curare activity of 3-acetoxy phenyltrimethylammonium methylsulfate (Nu-2017) in man. JOSEPH F. ARTUSIO, JR.,* WALTER F. RIKER, JR. AND W. CLARKE WESCOE. *Depts. of Surgery (Anesthesia) and Pharmacology Cornell Univ. Med. College and New York Hospital, New York City.*

976. Antagonism of D-tubocurarine by neostigmine methylsulfate. E. F. VAN MANNEN

(introduced by G. H. ACHESON). *Dept. of Pharmacology, Univ. of Cincinnati College of Medicine, Cincinnati.*

THURSDAY, APRIL 20, 9:00 A.M.

Chemotherapeutic Agents and Antibiotics

ROOM 9

S. M. Rosenthal, *Chairman*

977. Systemic versus nonabsorbable sulfonamide in the treatment of acute bacillary dysentary. DAVID LEHR, JOHN T. LUETTERS,* ARNOLD J. CAPUTE,* HAROLD ABRAMSON* AND LAWRENCE B. SLOBODY.* *Depts. of Pharmacology and Pediatrics, New York Med. College, Flower and Fifth Avenue Hospitals, New York City.*

978. Effect of some sodium sulfonates on tuberculosis in mice. VERSA V. COLE, H. R. HULPIEU AND S. H. HOPPER.* *Depts. of Pharmacology and Public Health, Indiana Univ., Indianapolis.*

979. Nonspecific factors in chemotherapy of trypanosomiases. PAUL L. EWING, HERSHAL G. TREE* AND GEORGE A. EMERSON. *Univ. of Texas Med. Branch, Galveston.*

980. Evaluation of simaroubidin in experimental canine amoebiasis. ASHTON C. CUCKLER (introduced by HANS MOLITOR). *Merck Inst. for Therapeutic Research, Rahway, N. J.*

981. Distribution and excretion of bis(5-chloro-2-hydroxyphenyl) methane. HERMAN C. HERRLICH (introduced by BENEDICT E. ABREU). *Research Dept., Pitman-Moore Co., Indianapolis, Ind.*

982. Isolation of β-nitropropionic acid from cultures of an *Aspergillus flavus*. MILTON T. BUSH AND OSCAR TOUSTER.* *Depts. of Pharmacology and Biochemistry, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

983. Specie variability in the inactivation of penicillins G and K. NATHAN RAKIETEN, GEORGE VALLEY* AND EDNA W. LYON.* *Bristol Lab. Inc., Syracuse, N. Y.* (Physiol.)

984. Toxicity of penicillin for previously treated animals. DAVID I. MACHT AND THOMAS HOFFMASTER.* *Dept. of Pharmacology, Sinai Hospital, Baltimore, Md.*

985. In vivo microscopic studies of intramuscular repository penicillin preparations. HAROLD M. PECK (introduced by KARL H. BEYER). *Dept. of Pharmacology, Med. Research Division, Sharp & Dohme, Inc., Glenolden, Pa.*

986. Further observations on the metabolic fate of chloramphenicol (chloromycetin). ANTHONY J. GLAZKO, WESLEY A. DILL* AND LORETTA M. WOLF.* *Research Labs., Parke, Davis and Co., Detroit, Mich.* (Physiol.)

987. Oral toxicity of bacitracin. HARTZELL G. PAYNE,* JOSEPH N. SPENCER* AND FRED H. SCHULTZ, JR. *Pharmaceutical Research Division, Commercial Solvents Corporation, Terre Haute, Ind.*

988. Neomycin toxicity studies. JOSEPH N. SPENCER,* HARTZELL G. PAYNE* AND FRED H. SCHULZ, JR. *Pharmaceutical Research Division, Commercial Solvents Corp., Terre Haute, Ind.*

THURSDAY, APRIL 20, 9:00 A.M.

Toxicity

ROOM 1

J. M. Coon, *Chairman*

989. Sodium catechol disulphonate protection in experimental uranium nitrate poisoning. L. M. LUSKY* AND H. A. BRAUN. *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

990. Protective action of sodium catechol disulphonate in acute poisoning by compounds of vanadium and cobalt. H. A. BRAUN AND L. M. LUSKY.* *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

991. Toxicity and effects on electrolyte excretion of lithium chloride administered to dogs. JACK L. RADOMSKI,* HENRY N. FUYAT,* ARTHUR A. NELSON AND PAUL K. SMITH. *Division of Pharmacology, Food and Drug Administration, Federal Security Agency and The George Washington Univ. School of Medicine, Washington, D. C.*

992. Cutaneous absorption of phenol from intact and damaged skin. MARIAN V. FREEMAN,* ELSIE ALVAREZ* AND JOHN H. DRAIZE. *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

993. Absorption of phenol following application of 2% phenol in calamine and 'Campho-Phenique' to the skin of experimental subjects. WM. B. DEICHMANN, R. RUEDEMANN* AND T. MILLER.* *Division of Pharmacology, Dept. of Physiology and Pharmacology and Dept. of Dermatology and Syphilology, Albany Med. College, Albany, N. Y.*

994. Urinary chromogen formation after exposure to aniline. DAVID L. HILL (introduced by

AMEDEO S. MARRAZZI). *Pharmacology Section, Med. Division, Army Chemical Center, Md.*

995. Chronic toxicity study of Veriloid in rats and dogs. JAMES T. GOURZIS, ROBERT O. BAUER AND WALTER W. JETTER (introduced by GEORGE L. MAISON). *Dept. of Pharmacology, Boston Univ. School of Medicine, Boston, Mass.*

996. Studies with low vapor concentrations of carbon tetrachloride labeled with carbon fourteen. I. Absorption, distribution and elimination upon inhalation by monkeys. D. D. MCCOLLISTER, W. H. BEAMER, G. J. ATCHISON AND H. C. SPENCER (introduced by D. D. IRISH). *Biochemical Research Lab. and Spectroscopy Lab., Dow Chemical Co., Midland, Mich.*

997. Biochemical changes in the liver produced by chemical intoxication. H. C. SPENCER AND NORABELLE T. WILLIAMS (introduced by D. D. IRISH). *Biochemical Research Lab., Dow Chemical Company, Midland, Mich.*

998. Factors influencing toxicity of fortified red squill powder. E. WILLIAM LIGON, JR. AND ROBERT R. SPROWELL.* *Pharmacology Lab., Insecticide Division, Livestock Branch, Production and Marketing Administration, U. S. Dept. of Agriculture, Beltsville, Md.*

THURSDAY, APRIL 20, 1:30 P.M.

Cardiac Agents

ROOM D

B. J. VOS, *Chairman*

999. A study of digitoxin in blood. JAMES G. HILTON (introduced by C. L. GEMMILL). *Dept. of Pharmacology, Univ. of Virginia Med. School, Charlottesville.*

1000. Studies with gitalin (amorphous) for the treatment of patients with congestive heart failure. R. C. BATTERMAN, A. C. DEGRAFF, L. B. GUTNER,* O. A. ROSE* AND J. LHOWE.* *Dept. of Therapeutics, New York Univ. College of Medicine, New York City.*

1001. Theophylline blood levels after oral, rectal and intravenous administration of aminophylline. EDWARD B. TRUITT, JR., AND VICTOR A. MCKUSICK. (Introduced by JOHN C. KRANTZ, JR.). *Dept. of Pharmacology, Univ. of Maryland and Cardiovascular Clinic, U. S. Marine Hospital, Baltimore, Md.*

1002. Production of auricular fibrillation in the dog by dipropylene glycol methyl ether (Dowanol 50B). LEONARD PROCITA* AND F. E. SHIDEMAN. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

1003. Mechanism of action of cardiac glycosides. ANNE CAMERON (introduced by B. N. CRAVER). *Research Dept., Division of Macrobiology, Ciba Pharmaceutical Products, Inc., Summit, N. J.*

1004. Cardiac action of certain sterols. C. W. GOWDEY,* J. S. LOYNES* AND R. A. WAUD. *Dept. of Pharmacology, Univ. of Western Ontario, London, Canada.*

1005. Effect of hypoadrenalcorticoidism and excessive doses of desoxycorticosterone acetate and thyroid upon the response of the rat to cardiac glycosides. HERBERT S. KUPPERMAN* AND ARTHUR C. DEGRAFF. *Dept. of Therapeutics, New York Univ. College of Medicine, New York City.*

1006. Factors affecting the electrogram of heart muscle. SOLOMON GARB (introduced by MCKEEN CATTELL). *Dept. of Pharmacology, Cornell Univ. Med. College, New York City.*

1007. Sensitivity to digitalis at the altitude of Bogotá. K. MEZEY AND R. BAQUERO (introduced by MCKEEN CATTELL). *Cesar Uribe-Piedrahita Research Labs., Bogotá, Colombia.*

THURSDAY, APRIL 20, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

THURSDAY, APRIL 20, 7:00 P.M.

Pharmacology Dinner

HOTEL CLARIDGE

THURSDAY, APRIL 20, 1:30 P.M.

Toxicity

ROOM 9

W. F. Von Oettingen, *Chairman*

1008. Toxicity of Parathion (*O-O*-diethyl *O*-p, nitrophenyl thiophosphate). LLOYD W. HAZLETON, EMILY G. HOLLAND* AND REBECCA C. HELLERMAN.* *Hazleton Labs., Falls Church, Va.*

1009. Effect of BAL on the distribution of intravenously administered zinc using Zn^{65}. H. D.

BRUNER. *Dept. of Pharmacology, Univ. of North Carolina, Chapel Hill, and Med. Division, Oak Ridge Inst. of Nuclear Studies, Oak Ridge, Tenn.*

1010. Acute beryllium poisoning in guinea pigs. KENNETH W. COCHRAN,* MARCELLA MAZUR* AND KENNETH P. DUBOIS. *Univ. of Chicago Toxicity Lab. and Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

1011. Bone and tooth lesions in the rat resulting from ingestion and intraperitoneal administration of beryllium compounds. E. A. MAYNARD,* W. L. DOWNS,* AND J. K. SCOTT. *Dept. of Radiation Biology, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.* (Pathol.)

1012. Toxicity studies on tomatine. ROBERT H. WILSON, GEORGE W. POLEY* AND FLOYD DEEDS. *Pharmacology Division, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture, Albany, Calif.*

1013. Comparison of chronic toxicities of synthetic sweetening agents. O. GARTH FITZHUGH AND ARTHUR A. NELSON. *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

1014. Cause of the increasing intravenous toxicity of hydrogen peroxide with progressive dilution. M. CAROLINE HRUBETZ, LILLIAN W. CONN, HYMAN R. GITTES AND JAMES K. MACNAMEE (introduced by AMEDEO S. MARRAZZI). *Toxicology and Pathology Sections, Med. Division, Army Chemical Center, Md.*

1015. Chronic studies of effect of hydroquinone on man. S. LANG,* N. R. BREWER AND A. J. CARLSON. *Physiology Lab., Univ. of Chicago, Chicago, Ill.* (Physiol.)

1016. Further chronic toxicity studies of hydroquinone. G. G. STERN,* S. LANG,* N. R. BREWER AND A. J. CARLSON. *Physiology Lab., Univ. of Chicago, Chicago, Ill.* (Physiol.)

1017. Subacute toxicity of radioactive phosphorus as related to the composition of the diet. W. E. CORNATZER,* GEORGE T. HARRELL, JR.,* DAVID CAYER* AND CAMILLO ARTOM. *Depts of Biochemistry and Internal Medicine, Bowman Gray School of Medicine, Winston-Salem, N. C.* (Biochem.)

THURSDAY, APRIL 20, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

THURSDAY, APRIL 20, 7:00 P.M.

Pharmacology Dinner

HOTEL CLARIDGE

THURSDAY, APRIL 20, 1:30 P.M.

General Pharmacology

ROOM 1

B. B. Clark, *Chairman*

1018. Rapid technique for statistical evaluation of 3-, 4- or 5-dose assays. LILA F. KNUDSEN (introduced by BERT J. VOS). *Division of Food, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

1019. Studies on tobacco chewing. WILLIAM A. WOLFF AND W. E. GILES.* *Tobacco Research Lab., Bowman Gray School of Medicine, Winston-Salem, N. C.* (Biochem.)

1020. Pharmacologic action of hydrazine. E. A. FINE, ANNE M. KUNKEL AND J. H. WILLS (introduced by AMEDEO S. MARRAZZI). *Pharmacology Section, Med. Division, Army Chemical Center, Maryland.*

1021. Effect of diphenylhydantoin, temperature, and phosphate concentration on P^{32} uptake by frog sciatic nerve. E. FINGL, D. M. WOODBURY, J. R. WARD AND J. E. P. TOMAN (introduced by L. S. GOODMAN). *Depts. of Pharmacology and Physiology, Univ. of Utah College of Medicine, Salt Lake City.*

1022. Silicone fluids as vehicles for the intramuscular administration of drugs. BERNARD P. MCNAMARA, ELIZABETH A. MCKAY* AND MAGGIE M. QUILLE.* *Pharmacology Section, Med. Division, Army Chemical Center, Md.*

1023. Pitfalls in the treatment of frostbite with heparin. DAVID WEINER AND KURT LANGE (introduced by M. G. MULINOS). *Dept. of Medicine, New York Med. College, New York City.*

1024. Pyrexia in rabbits following the injection of filtrates of typical mold cultures. WILLIAM D. HARKNESS, WALKER L. LOVING AND F. ALLEN HODGES (introduced by BERT J. VOS). *Division of Pharmacology and Division of Microbiology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

1025. Analysis of DL-norleucine inhibition in *Achromobacter fischerei*. EDWIN E. DANIEL (introduced by MARK NICKERSON). *Dept. of Biology, Johns Hopkins Univ., Baltimore, Md.*

1026. Alleged gastric mucin deficiency in peptic ulcer. GEORGE B. JERZY GLASS AND LINN J.

BOYD (introduced by MICHAEL G. MULINOS). *Dept. of Medicine, New York Med. College, Flower and Fifth Avenue Hospitals, New York City.*

THURSDAY, APRIL 20, 4:30 P.M.

Pharmacology Business Meeting

ROOM D

THURSDAY, APRIL 20, 7:00 P.M.

Pharmacology Dinner

HOTEL CLARIDGE

FRIDAY, APRIL 21, 9:00 A.M.

Local Anesthetics

ROOM D

Versa V. Cole, *Chairman*

1027. Production of anesthesia in mucous membranes by procaine and physostigmine. MARGARET E. GREIG, W. C. HOLLAND* AND P. E. LINDVIG.* *Dept. of Pharmacology, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

1028. Diethylaminoethyl esters of 2-hydroxy- and 2-alkoxy-4-aminobenzoic acid as local anesthetics. E. P. LUDUENA AND JAMES O. HOPPE.* *Sterling-Winthrop Research Inst., Rensselaer, N. Y.*

1029. Distribution of procaine in squid axons (Loligo). A. P. TRUANT (introduced by PAUL K. SMITH). *Dept. of Pharmacology, George Washington Univ. School of Medicine, Washington, D. C.*

1030. A comparative study of the pharmacological properties of procaine and procaine amide. PEGGY JO NEWMAN* AND BYRON B. CLARK. *Dept. of Pharmacology, Tufts College Med. School, Boston, Mass.*

1031. Cardiovascular aspects of acute cocaine intoxication. JOHN E. STEINHAUS (introduced by A. L. TATUM). *Dept. of Pharmacology, Univ. of Wisconsin Med. School, Madison.*

1032. Plasma levels and urinary excretion of cocaine in the dog and the rabbit. F. G. MCMAHON,* L. A. WOODS AND M. H. SEEVERS. *Dept. of Pharmacology, Univ. of Michigan, Ann Arbor.*

1033. Cardiovascular and respiratory effects of β-diethylaminoethyl - 4 - n-hexyloxybenzilate HCl. WILLIAM M. ALEXANDER AND WILLIAM K. MCDONALD (introduced by BENEDICT E. ABREU). *Research Dept., Pitman-Moore Company, Indianapolis, Ind.*

1034. Comparison of central and peripheral nervous system effects of certain antimuscarinic local anesthetic agents. BENEDICT E. ABREU, FREDERICK H. MEYERS* AND WILLIAM M. ALEXANDER.* *Research Dept., Pitman-Moore Co., Indianapolis, Ind., and Division of Pharmacology and Experimental Therapeutics, Univ. of California Med. School, San Francisco.*

1035. Observations on the effects of procaine, and diethylaminoethanol upon hemoglobin. D. D. BONNYCASTLE, JOSEPH M. WHITE* AND CARL S. HELLIJAS.* *Dept. of Pharmacology and Toxicology, Yale Univ. School of Medicine, New Haven, and Dept. of Anesthesiology, Hartford Hospital, Hartford, Conn.*

1036. Evaluation of local anesthetics for nerve block. J. K. W. FERGUSON AND J. F. ALKENHEAD.* *Dept. of Pharmacology, Univ. of Toronto, Toronto, Canada.*

1937. Comparison of procaine and tridiurecaine. G. CARL RAU* AND B. A. WESTFALL. *Dept. of Physiology and Pharmacology, Univ. of Missouri Med. School, Columbia, Mo.* (Physiol.)

FRIDAY, APRIL 21, 9:00 A.M.

Diuretics

ROOM 9

R. C. Batterman, *Chairman*

1038. A bioassay method for diuretic substances. J. MAXWELL LITTLE AND CARLOS COOPER, JR.* *Dept. of Physiology and Pharmacology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N. C.*

1039. Studies on alterations of renal function following sciatic nerve stimulation and metabolic stimulants. JOHN H. MOYER* AND CARROLL A. HANDLEY. *Depts. of Medicine and Pharmacology, Baylor Univ. College of Medicine, Houston, Texas.*

1040. Effect of thyroxine and dinitrophenol on renal functions. CARROLL A. HANDLEY. *Dept. of Pharmacology, Baylor Univ. College of Medicine, Houston, Texas.*

1041. Incidence of local reactions to mercuhydrin and thiomerin by subcutaneous injection in patients with congestive failure. WALTER MO-

DELL, HARRY GOLD, NATHANIEL KWIT,* LEON WARSHAW,* HAROLD OTTO* AND WILLIAM ZAHM.* *Dept. of Pharmacology, Cornell Univ. Med. College, Cardiovascular Research Unit of Beth Israel Hospital and Cardiac Service of Hospital for Joint Diseases, New York City.*

1042. Toxicity and irritation studies on some organic mercurial diuretics. J. K. SMITH,* R. E. BRIDENSTINE,* C. R. THOMPSON* AND H. W. WERNER. *Pharmacology Dept., William S. Merrell Co., Cincinnati, Ohio.*

1043. Absorption, excretion, and tissue distribution of three mercurial diuretics. R. G. HERRMANN,* G. R. KLAHM* AND H. W. WERNER. *Pharmacology Dept. William S. Merrell Co., Cincinnati, Ohio.*

1044. Effect of diuretics and nephrotoxic drugs on kidney ATP-ase. ANDRES GOTH, JAMES HOLMAN* AND VIRGINIA O'DELL.* *Dept. of Physiology and Pharmacology, Southwestern Med. School, Dallas, Texas.*

1045. Toxicological studies of a new mercurial diuretic: 8 - (beta-acetoxymercuri-gamma-methoxypropyl) - 3-carboxy-coumarin-theophylline (EN-564). HAROLD BLUMBERG, ALBERT SCHLESINGER* AND S. M. GORDON.* *Research Labs., Endo Products, Inc., Richmond Hill, N. Y.* (Nutrit.)

FRIDAY, APRIL 21, 9:00 A.M.

General Pharmacology

ROOM 1

W. B. Deichmann, *Chairman*

1046. A hormonal treatment of the adult cat that assures a uterus in vivo highly responsive to oxytocics. MARY LEE CLARY (introduced by B. N. CRAVER). *Research Dept., Division of Macrobiology, Ciba Pharmaceutical Products, Inc., Summit, N. J.*

1047. Uterine action of aqueous extracts of corpus luteum. HAROLD H. BRYANT,* C. JELLEFF CARR AND JOHN C. KRANTZ, JR. *Dept. of Pharmacology, Univ. of Maryland School of Medicine, Baltimore, Md.*

1048. Comparison of the rate of uptake of radioactive thyroxine by the tuber cinereum, hypophysis and thyroid. EDWARD O. HARPER* AND PAUL A. MATTIS. *Depts. of Psychiatry and Pharmacology, Western Reserve Univ. School of Medicine, Cleveland, Ohio.*

1049. Effects of methyl bis-(β-chloroethyl)-amine (nitrogen mustard) on regeneration and alkaline phosphatase activity of urodele larvae forelimbs. ALEXANDER G. KARCZMAR AND GEORGE G. BERG (introduced by CHARLES F. MORGAN). *Dept. of Pharmacology and Materia Medica, Georgetown Univ. School of Medicine, Washington, D. C.*

1050. Some substituted ethylenimines with actions like nitrogen mustards. J. B. THIERSCH* AND F. S. PHILIPS. *Pharmacology Section, Division of Experimental Chemotherapy, Sloan-Kettering Inst. for Cancer Research, New York City.*

1051. Antioxidant and stabilizing action of propylene glycol. THEODORE KOPPANYI. *Dept. of Pharmacology and Materia Medica, Georgetown Univ. School of Medicine, Washington, D. C.*

1052. In vivo conjugation by rats of parenterally administered histamine. R. CARL MILLICAN (introduced by SANFORD M. ROSENTHAL). *Natl. Insts. of Health, Bethesda, Md.*

1053. Liberation of histamine from carnosine and histidine. JOE NASH* AND G. A. EMERSON. *Univ. of Texas Med. Branch, Galveston.*

1054. Release of nucleic acids from cell components by heparin. NORMAN G. ANDERSON AND KARL M. WILBUR (introduced by FREDERICK BERNHEIM). *Dept. of Zoology, Duke Univ., Durham, N.C.*

1055. Influence of age on metabolic rate and phosphate compounds of cardiac muscle. JO'ANN JEHL AND ALBERT WOLLENBERGER (introduced by OTTO KRAYER). *Dept. of Pharmacology, Harvard Med. School, Boston, Mass.*

Papers Read by Title

1056. Comparative effects of epinephrine and arterenol-isopropyl arterenol mixtures. RAYMOND P. AHLQUIST. *Dept. of Pharmacology, Univ. of Georgia School of Medicine, Augusta.*

1057. Effect of rutin and related compounds on experimental frostbite in rabbits. ANTHONY M. AMBROSE, DOROTHY J. ROBBINS* AND FLOYD DEEDS. *Pharmacology Division, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture, Albany, Calif.*

1058. Effect of carbon dioxide on phaseboundary potential of acetyl-beta-methylcholine in the presence of brain esterase. T. C. BARNES. *Dept. of Pharmacology, Hahnemann Med. College and Hospital of Philadelphia, Philadelphia, Pa.*

1059. Acute toxicity of Veriloid for some laboratory animals. ROBERT O. BAUER,* GEORGE L. MAISON AND J. W. STUTZMAN. *Dept. of Pharmacology, Boston Univ. School of Medicine, Boston, Mass.*

1060. Studies with low vapor concentrations of carbon tetrachloride labeled with carbon four-

teen. II. Absorption and elimination upon skin exposure of monkeys. W. H. BEAMER, D. D. MCCOLLISTER, G. J. ATCHISON AND H. C. SPENCER (introduced by D. D. IRISH). *Biochemical Research Lab. and Spectroscopy Lab., Dow Chemical Co., Midland, Mich.*

1061. Metabolic fate of evipal. MILTON T. BUSH, THOMAS C. BUTLER AND H. L. DICKISON. *Dept. of Pharmacology, Vanderbilt Univ. School of Medicine, Nashville, Tenn.*

1062. Cardiac glycosides of *Tanghinia venenifera*. K. K. CHEN AND FRANCIS G. HENDERSON.* *Lilly Research Labs., Eli Lilly and Co., Indianapolis, Ind.*

1063. Relation of methylated xanthine retardation of development to cholinesterase values. RALPH HOLT CHENEY. *Dept. of Biology, Brooklyn College, Brooklyn, N. Y. and Marine Biological Lab., Woods Hole, Mass.*

1064. Use of intravenous ethanol in the treatment of a case of opiate addiction, and other experimental therapeutic tests with intravenous ethanol in humans. GEORGE P. CHILD, FRANK CLARE* AND JOHN FARRELL.* *Depts. of Physiology, Pharmacology, Neurosurgery and Surgery, Albany Med. College, Albany, N. Y.*

1065. Failure to propagate mouse sarcoma 180 after exposure to low temperature. WINDSOR C. CUTTING. *Dept. of Pharmacology and Therapeutics, Stanford Univ. School of Medicine, San Francisco, Calif.*

1066. Effect of salicylates on sensitization to horse serum and egg white. ROBERT H. DREISBACH. *Dept. of Pharmacology and Therapeutics, Stanford Univ. School of Medicine, San Francisco, Calif.*

1067. Toxicity and anticholinesterase action of p-nitrophenyl dimethyl thionophosphate. KENNETH P. DUBOIS, MARCELLA MAZUR* AND KENNETH W. COCHRAN.* *Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

1068. Effect of various steroids on aerobic respiration of the brain of the castrate male rat. EUGENE EISENBERG,* GILBERT S. GORDAN* AND HENRY W. ELLIOTT. *Division of Pharmacology and Experimental Therapeutics, and Division of Medicine, Univ. of California School of Medicine, San Francisco.*

1069. Pharmacological studies of two new anticonvulsants 3,5-dimethyl, 5, ethyloxazolidine-2,4-dione (Paradione) and 3-methyl-5, phenylhydantoin (Nuvarone). G. M. EVERETT* AND R. K. RICHARDS. *Dept. of Pharmacology, Abbott Labs., North Chicago, Ill.*

1070. Morphine-induced emesis in dogs treated with β-dimethylaminoethylbenzohydrylether-8-chlorotheophyllinate (Dramamine). HOMER B. FREESE,* ROBERT G. BIANCHI* AND W. E. HAMBOURGER. *Pharmacology Dept., Division of Biological Research, G. D. Searle and Co., Chicago, Ill.*

1071. Synergism between bacitracin, polymyxin B, and streptomycin HCl: in vitro tests with *Endamoeba histolytica* and organism *t*. MIRIAM GOULD AND EDER LINDSAY HANSEN (introduced by HAMILTON H. ANDERSON). *Division of Pharmacology and Experimental Therapeutics, Univ. of California School of Medicine, San Francisco.*

1072. Studies on some smooth muscle effects of 3-hydroxy-N-methylmorphinan hydrobromide (Nu-2206). E. G. GROSS AND R. M. FEATHERSTONE. *Dept. of Pharmacology, State Univ. of Iowa, College of Medicine, Iowa City.*

1073. Adrenergic blockade in man by a new imidazole derivative, C-7337. HANS H. HECHT, R. CRANDALL, AND A. J. SAMUELS (introduced by LEO T. SAMUELS). *Dept. of Medicine, Univ. Utah College of Medicine, Salt Lake City.*

1074. A simple spectrophotometric method for the determination of tetra-ethyl thiuramdisulfide (Antabuse) in blood and urine. CHARLES H. HINE AND KSHITISH J. DIVATIA.* *Division of Pharmacology and Experimental Therapeutics, Univ. of California School of Medicine, San Francisco.*

1075. Responses of growth of penicillia to cardiotonic glycosides. JAMES P. HOLLOWAY* AND JAMES C. RICE. *Dept. of Pharmacology, Univ. of Mississippi School of Medicine, University.*

1076. Antibiotics against natural amebiasis in macaques. ARSENY K. HRENOFF* AND HAMILTON H. ANDERSON. *Division of Pharmacology and Experimental Therapeutics, Univ. of California School of Medicine, San Francisco.*

1077. Effects of certain enzyme inhibitors on breakdown of pentobarbital in vitro. J. B. KAHN, JR. (introduced by J. M. COON). *Dept. of Pharmacology, Univ. of Chicago, Chicago, Ill.*

1078. Clinical evaluation of two new analgesics, heptazone and WIN 1161-2 as a test of a new method of measuring analgesic power. ARTHUR S. KEATS* AND HENRY K. BEECHER. *Anesthesia Lab. of Harvard Med. School at Massachusetts General Hospital, Boston, Mass.*

1079. Mechanism of vasomotor actions of sparteine. GO LU. *Dept. of Pharmacology and Therapeutics, Stanford Univ. School of Medicine, San Francisco, Calif.*

1080. Influence of penicillin—penicillinase combinations and PABA-sulfonamide mixtures on the growth of higher plants compared with bacteria. DAVID I. MACHT. *Dept. of Pharmacology, Sinai Hospital, Baltimore, Md.*

1081. Biological antagonism between aspartic and glutamic acids controlling the acid produced by *Streptococcus fecalis R*. MICHAEL G. MU-

LINOS, A. MARINARO* AND NELDA I. RICCI.* *Dept. of Pharmacology, New York Med. College, and Interchemical Corp., New York City.*

1082. Subacute toxicity of 'Thiomerin' compared to other mercurial diuretics. O. S. ORTH, F. L. KOZELKA AND R. T. CAPPS.* *Dept. of Pharmacology and Toxicology, Univ. of Wisconsin Med. School, Madison.*

1083. Distribution of C^{14} labeled meperidine in the albino rat. NIKOLAS P. PLOTNIKOFF (introduced by HENRY W. ELLIOTT). *Division of Pharmacology and Experimental Therapeutics, Univ. of California School of Medicine, San Francisco.*

1084. Anhidrotic action of agaric acid in humans. MORTON L. RODMAN (introduced by THEODORE KOPPANYI). *Dept. of Pharmacology and Materia Medica, Georgetown Univ., School of Medicine, Washington, D. C.*

1085. Effects of beryllium chloride in Locke-Ringer solution upon the isolated rabbit ileum and heart. P. R. SALERNO,* L. E. ELLINWOOD,* L. G. ABOOD* AND J. M. COON. *Univ. of Chicago Toxicity Lab. and Dept. of Pharmacology, Chicago, Ill.*

1086. Cardiac action of nitrogenous lactones. F. W. SCHUELER AND C. C. HANNA.* *Dept. of Pharmacology, State Univ. of Iowa, College of Medicine, Iowa City.*

1087. Action of tetraethylammonium bromide and acetylcholine on the kitten phrenic nerve-diaphragm preparation. WALTER J. SULLIVAN* AND CHARLES J. KENSLER. *Dept. of Pharmacology, Cornell Univ. Med. College, New York City.*

1088. Effects of tetra-ethyl thiuramdisulfide (Antabuse) on the toxicity of methyl alcohol. E. LEONG WAY AND RUSSILL HAUSMAN.* *Division of Pharmacology and Experimental Therapeutics, Univ. of California School of Medicine, and College of Pharmacy, San Francisco.*

1089. Studies on nervous and humoral control of coronary circulation. MARTIN M. WINBURY,* PATRICIA M. MICHIELS* AND D. M. GREEN. *Pharmacology Dept., Division of Biological Research, G. D. Searle & Co., Chicago, Ill.*

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY

Thirty-fifth Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Inflammation, Infection

ROOM 10

William M. Hale, *Chairman*

1090. Biology of granulomatous inflammation; experimental spermatic granulomas. MURRAY RUSSELL* AND NATHAN B. FRIEDMAN. *Division of Labs., Cedars of Lebanon Hospital, Los Angeles, Calif.*

1091. In vitro change of a streptococcus from pneumotropic to neurotropic type and the in vivo genesis of filtrable pneumotropic and neurotropic phases of the streptococcus. EDWARD C. ROSENOW. *Bacteriological Research, Longview Hospital, Cincinnati, Ohio.*

1092. Histologic and enzymologic changes in lungs of rabbits with airborne tuberculosis. CHARLES WEISS, MARIAL L. BOYAR* AND H. L. RATCLIFFE.* *Lab. of Jewish Hospital and Penrose Research Lab., Zoological Society, Philadelphia, Pa.*

1093. Inhibition of the tuberculin reaction by cortisone in vaccinated guinea pigs. H. C. STOERK. *Merck Inst. for Therapeutic Research, Rahway, N. J.*

1094. I^{131} as an antigen label in the circulating serum of non-immune rabbits. WILLIAM C. KNOX (introduced by KENNETH M. ENDICOTT). Pathology Lab., Natl. Insts. of Health, Bethesda, Md.

1095. Effect of diacetylethylene on viruses, bacteria and blood. BENJAMIN E. SANDERS, JOAN C. WILSON, A. R. KELLY, GEORGE H. MANGUN (introduced by FRANK W. HARTMAN). *Dept. of Labs., Henry Ford Hospital, Detroit, Mich.*

1096. Effect of penicillin and chloromycetin on oxygen uptake of typhus infected embryonate eggs. DONALD GREIFF* AND HENRY PINKERTON. *Depts. of Biology and Pathology, St. Louis Univ., St. Louis, Mo.*

1097. Determination of opsonins for *Br. suis*. ABOU D. POLLACK* AND JOSEPH VICTOR. *Biological Dept., Chemical Corps, Camp Detrick, Md.*

1098. Grafting of rabbit lymphatic tissue on chorioallantoic membrane of the chick embryo. SUSANNA HARRIS* AND T. N. HARRIS. *Children's Hospital of Philadelphia (Dept. of Pediatrics, School of Medicine, Univ. of Pennsylvania), Philadelphia.* (Immunol.)

1099. Agglutination of bacteria by living white blood cells. ERIC REISS,* ELIZABETH MERTENS* AND WILLIAM E. EHRICH. *Philadelphia Gen'l Hospital and Graduate School of Medicine, Univ. of Pennsylvania, Philadelphia.*

1100. Further studies on thermostable leukocytosis factor of exudates. VALY MENKIN. *Agnes Barr Chase Fndn. for Cancer Research, Temple Univ. School of Medicine, Philadelphia, Pa.*

TUESDAY, APRIL 18, 9:00 A.M.

Deficiencies, Toxicities

ROOM F

James F. Rinehart, *Chairman*

1101. Action of 4-amino-pteroylglutamic acid on the early pregnancy of rats and mice. J. B. THIERSCH AND F. S. PHILIPS (introduced by C. P. RHOADS). *Pharmacology Section, Division of Exper. Chemotherapy, Sloan-Kettering Inst. for Cancer Research, New York City.*

1102. Effect of thallium, lead and other metals on development of the chick embryo. L. P. RIDGWAY, P. A. PATTERSON, D. A. KARNOFSKY (introduced by C. P. RHOADS). *Division of Exper. Chemotherapy, Sloan-Kettering Inst. for Cancer Research, New York City.*

1103. Obesity and food requirements of albino mice following administration of goldthioglucose. S. W. WAXLER* AND G. BRECHER. *Army Med. Dept. Res. and Grad. School and Natl. Insts. of Health, Bethesda, Md.*

1104. Demyelinization induced experimentally by means of lipase. F. STEPHEN VOGEL (introduced by JOHN G. KIDD). *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1105. Histologic features of the skin of dogs on a low fat diet. ARILD E. HANSEN, S. GRANT HOLMES* AND HILDA F. WIESE.* *Depts. of Pediatrics and Dermatology, Univ. of Texas Med. Branch, Galveston.*

1106. Effect of esters of linoleic and arachidonic acids in the diet in relation to histologic features of the skin of dogs. ARILD E. HANSEN, S. GRANT HOLMES* AND HILDA F. WIESE.* *Depts. of Pediatrics and Dermatology, Univ. of Texas Med. Branch, Galveston.*

1107. Pathological muscle changes produced in guinea pigs by deficiency of antistiffness factors and effect of ergostanyl acetate. LAWRENCE W. HANLON,* N. CHANDLER FOOT,* JANET TRAVELL AND SEYMOUR H. RINZLER.* *Depts. of Pharmacology and Anatomy, Cornell Univ. Med. College, New York City.* (Pharmacol.)

1108. Influence of estrogenic hormone on calcium and phosphorus balances in osteogenesis imperfecta congenita. HARRY H. WOMACK, JR.,* HILDA F. WIESE* AND ARILD E. HANSEN. *Dept. of Pediatrics, Univ. of Texas Med. Branch, Galveston.*

1109. Nitrogen, phosphorus and calcium metabolism in the rachitic rat given excessive doses of vitamin A. CHARLOTTE L. MADDOCK* AND S. B. WOLBACH. *Division of Nutritional Research, Children's Hospital, Boston, Mass.*

1110. Histochemical studies on the skeleton in experimental scurvy. RICHARD H. FOLLIS, JR. *Dept. of Pathology, Johns Hopkins Univ., Baltimore, Md.*

1111. Loss of body potassium during pergastric intestinal perfusion. LIONEL BERNSTEIN,* PHILIP B. O'NEILL,* ARTHUR BERNSTEIN* AND WILLIAM S. HOFFMAN. *Hektoen Inst. for Med. Research of the Cook County Hospital, Chicago, Ill.* (Biochem.)

TUESDAY, APRIL 18, 1:30 P.M.

Cardiac, Vascular, Renal

ROOM F

D. Murray Angevine, *Chairman*

1112. Comparison of Physico-chemical properties of isolated skeletal and cardiac myofibrils. CHARLES A. ASHLEY,* GEORGE M. HASS AND ARMIN SCHICK.* *Rush Lab. of Pathology, Presbyterian Hospital and Univ. of Illinois College of Medicine, Chicago.*

1113. Lipids of normal and pathological aortas. R. C. BUCK* AND R. J. ROSSITER. *Dept. of Biochemistry, Univ. of Western Ontario, London, Can.* (Biochem.)

1114. Study of fibro-elastic intimal arteriosclerosis following hypothermal medial degeneration of young and old rabbits. C. BRUCE TAYLOR,* DAVID BALDWIN* AND GEORGE H. HASS. *Rush Lab. of Pathology, Presbyterian Hospital and Univ. of Illinois College of Medicine, Chicago.*

1115. Experimental cholesterol atherosclerosis in bilaterally adrenalectomized rabbits. AARON KELLNER AND JAMES W. CORRELL.* *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1116. Further studies on the pathogenesis of experimental necrotizing arteritis. RUSSEL L. HOLMAN, CARROLL H. LIPPARD AND BLAND GIDDINGS.* *Dept. of Pathology, Louisiana State Univ. School of Medicine, New Orleans, and Dept. of Biochemistry, Distillation Products, Inc., Rochester, N. Y.*

1117. Experimental cardiovascular disease in monkeys and rabbits. TOM R. HAMILTON,* HARRY E. DASCOMB* AND JEROME T. SYVERTON. *Dept. of Bacteriology and Immunology, Univ. of Minnesota, Minneapolis, and Dept. of Microbiology, Louisiana State Univ. School of Medicine, New Orleans.*

1118. Autoantibodies to in-vivo-damaged kidney. Relationship to nephrotoxin. DOUGLAS H. SPRUNT, WAYNE R. ROGERS* AND ANNA DEAN DULANEY.* *Inst. of Pathology, Univ. of Tennessee, Memphis.*

1119. Role of aciduria in the development of hemoglobinuric nephrosis in dehydrated rabbits. JOSEPH J. LALICH AND SEYMOUR SCHWARTZ.* *Dept. of Pathology, Univ. of Wisconsin Med. School, Madison.*

1120. Pathogenesis of hypertension induced by renal constriction. L. J. RATHER (introduced by A. J. COX). *Dept. of Pathology, Stanford Univ. School of Medicine, San Francisco, Calif.*

1121. Polycystic mesonephros (Goldfish Kidney). HANS G. SCHLUMBERGER. *Dept. of Pathology, Ohio State Univ. College of Medicine, Columbus.*

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

WEDNESDAY, APRIL 19, 9:00 A.M.

Coagulation

ROOM F

Joint Session with the American Society of Biological Chemists

J. L. Bollman, *Chairman*

1122. Coagulation defect of vitamin K deficiency compared with that caused by dicumarol. F. D. Mann,* J. D. Mann* and J. L. Bollman. *Inst. of Exper. Medicine and Division of Clinical Labs., Mayo Clinic, Rochester, Minnesota.*

1123. Studies on the utilization of antihemophilic factor during clotting. John B. Graham,* George D. Penick* and K. M. Brinkhous. *Dept. of Pathology, Univ. of North Carolina, Chapel Hill.*

1124. Preparation of Ac-globulin free plasma; assay of Ac-globulin. John R. Carter* and E. D. Warner. *Dept. of Pathology, State Univ. of Iowa, Iowa City.*

1125. Anticoagulant polysaccharide sulfates. Louis A. Kazal, Daniel S. Spicer* and Rose A. Brahinsky.* *Dept. of Biochemistry, Med. Research Div., Sharp and Dohme, Inc., Glenolden, Pa.* (Biochem.)

1126. Studies on adhesion and syneresis in fibrin clots. Peter R. Morrison, Arthur L. Seiler, James M. Head (introduced by J. W. Williams). *Depts. of Physiology and Zoology, Univ. of Wisconsin, Madison.* (Biochem.)

1127. Reversible inhibition of the clotting of fibrinogen. Sidney Shulman* and John D. Ferry. *Dept. of Chemistry, Univ. of Wisconsin, Madison.* (Biochem.)

1128. Effect of surface on the coagulation reactions. Armand J. Quick, *Dept. of Biochemistry, Marquette Univ. School of Medicine, Milwaukee, Wis.* (Biochem.)

1129. Relation of labile factor to "accelerator effect" of serum. Mario Stefanini and William H. Crosby (introduced by W. H. Fishman). *Ziskind Lab. (Hematology Section) of Joseph H. Pratt and New England Center Hospitals and the Dept. of Medicine, Tufts College Med. School, Boston, Mass.* (Biochem.)

1130. Staphylocoagulase formation without plasma co-factor. Earl B. Gerheim, Julia K. Gerheim (introduced by Arnold G. Ware). *Dept. of Physiology and Pharmacology, Wayne Univ. College of Medicine, Detroit, Mich.* (Biochem.)

Wednesday, April 19, 9:00 a.m.

Tissue Growth and Transplant

room 10

John G. Kidd, *Chairman*

1131. Neoplasms in rats treated with pituitary growth hormone. I. Pulmonary and lymphatic tissues. Henry D. Moon,* Miriam E. Simpson, Choh Hao Li and Herbert M. Evans. *Div. of Pathology, Univ. of California School of Medicine, San Francisco, Inst. of Exper. Biology, Univ. of California, Berkeley, and Veterans Adm. Hospital, San Francisco.*

1132. Malignant lymphoma, reticulum cell type (reticulum cell sarcoma), in albino rats. F. E. Shaffer, F. P. Cleveland and F. R. Dutra (introduced by E. A. Gall). *Kettering Lab. of Applied Physiology, Univ. of Cincinnati College of Medicine, Cincinnati, Ohio.*

1133. Ultra-thin sectioning of tissue for electron microscope. James Hillier, Mark Gettner (introduced by S. Mudd). *RCA Lab., Princeton, N. J., and Sloan-Kettering Inst. for Cancer Research, New York City.*

1134. Influence of fractions of chick embryonic extracts upon proliferation of chick fibroblasts. George M. Hass, Albert Schweitzer* and Helen Boscia.* *Rush Lab. of Pathology, Presbyterian Hospital and Univ. of Illinois College of Medicine, Chicago.*

1135. Ameboid movement of neoplastic cells. H. T. Enterline* and Dale Rex Coman. *Dept. of Pathology, Univ. of Pennsylvania School of Medicine, Philadelphia.*

1136. Experimental study of virus-host cell relationship in fowl pox. F. B. Bang and G. O. Gey.* *Johns Hopkins Hospital, Baltimore, Md.*

1137. Morphological and biochemical changes produced by infectious myxoma virus in the chorioallantoic membrane of the developing chick embryo. Margaret H. D. Smith* and Ernest Kun. *Depts. of Pediatrics and Medicine, Division of Infectious Diseases, Tulane Univ., New Orleans, La.* (Pharmacol.)

1138. Transmissible papilloma in monkeys. Balduin Lucké, Herbert Ratcliffe* and Charles Breedis. *Dept. of Pathology, School of Medicine, Univ. of Pennsylvania and Penrose Research Lab., Philadelphia Zoological Garden, Philadelphia.*

1139. Sarcomatoid growths resulting from mammary carcinoma cells that had sojourned in immune mice. Helene Wallace Toolan* and John G. Kidd. *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1140. Interrelations between the adrenal cortex and lymphoid tissues; growth of adrenal transplants in spleen and thymus with local tymic atrophy. Edward J. Bomze* and Nathan B. Friedman. *Division of Labs., Cedars of Lebanon Hospital, Los Angeles, Calif.*

1141. Fate of transplanted embryonic gonadal tissue into hosts of inbred mouse strains.

ALFRED GOLDEN. *Dept. of Pathology, Veterans Administration Hospital, Buffalo, N. Y.*

1142. Cerebrospinal fluid findings in brain tumors. M. SPIEGEL-ADOLF AND H. T. WYCIS.* *Depts. of Colloid Chemistry and Neurosurgery, Temple Univ., Philadelphia, Pa.* (Biochem.)

WEDNESDAY, APRIL 19, 1:30 P.M.

Growth Inhibition

ROOM F

Shields Warren, *Chairman*

1143. Influence of dietary protein on tumor production by 2-acetylaminofluorene. R. W. ENGEL. *Lab. of Animal Nutrition, Alabama Polytechnic Inst., Auburn.* (Nutrition.)

1144. Properties of nitrogen mustard-protein reaction products. A. R. KELLY,* GEORGE H. MANGUN,* BENJAMIN E. SANDERS* AND FRANK W. HARTMAN. *Dept. of Labs., Henry Ford Hospital, Detroit, Mich.*

1145. Cellular dynamics in intestinal mucosa; quantitative measurements of effects of antimitotic agents. Effect of nitrogen mustard on cell division and differentiation. BANICE WEBBER,* BENJAMIN R. CRAIG* AND NATHAN B. FRIEDMAN. *Division of Labs. and Dept. of Radiotherapy, Cedars of Lebanon Hospital, Los Angeles, Calif.*

1146. Metabolite antagonists in experimental cancer: Guanazolo. BORIS SOKOLOFF, JAMES B. REDD AND RAYMOND DUTCHER (introduced by LEO LOEB). *Southern Bio-Research Lab., Florida Southern College, Lakeland.*

1147. Hyperplasia of lymphoid tissues following implantation of cancer cells in resistant hosts. JOHN T. ELLIS,* HELENE WALLACE TOOLAN* AND JOHN G. KIDD. *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1148. Immunologic approach to study of treatment of transmitted leukemia in Ak mice. P. F. HAHN, E. L. CAROTHERS,* LOUIS BERNARD* AND MARVIN JACKSON.* *Meharry Med. College, Nashville, Tenn.*

1149. Fate of gold colloids introduced into the circulation of the mouse. C. W. SHEPPARD,* J. FURTH AND LEON WISH.* *Biology Division, Oak Ridge Natl. Lab., Oak Ridge, Tenn.*

1150. Effect of aureomycin and antibiotics on whole body irradiation. JOE W. HOWLAND, FRANK FURTH AND M. COULTER (introduced by FRIEDA S. ROBBINS). *Dept. of Radiation Biology and Div. of Med. Services, Atomic Energy Project, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

1151. Effect of adrenalectomy and gluthathione on x-ray induced mortality in mice. E. P. CRONKITE AND W. H. CHAPMAN (introduced by K. M. ENDICOTT). *Naval Med. Research Inst., Bethesda, Md.*

1152. Radioactive phosphorous studies in neoplastic disease. J. STEWART ROONEY* AND SAUL HERTZ. *Massachusetts Women's Hospital and Radioactive Isotope Research Inst., Boston.*

1153. Metabolic alterations in radioactive isotope concentration by malignant tissues induced by hormone pretreatment. SAUL HERTZ AND J. STEWART ROONEY.* *Massachusetts Women's Hospital and Radioactive Isotope Research Inst., Boston.*

1154. Marrow extracts affecting blood and marrow leukocytes. BERNHARD STEINBERG, ALBERT A. DIETZ* AND RUTH A. MARTIN.* *Toledo Hospital Inst. of Med. Research, Toledo, Ohio.*

WEDNESDAY, APRIL 19, 7:00 P.M.

Pathology Dinner

HOTEL JEFFERSON

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Liver, Pancreas, Adrenal

ROOM F

Frank C. Mann, *Chairman*

1155. Comparison of several chlorinated hydrocarbon insecticides with respect to pathological changes produced in rats by feeding at low levels, 1 to 100 P.P.M. A. A. NELSON, O. G. FITZHUGH AND G. WOODWARD.* *Division of Pharmacology, Food and Drug Administration, Federal Security Agency, Washington, D. C.*

1156. Cytoplasmic reactions of hepatic parenchymal cells to experimental injury in rodents and dogs. W. LANE WILLIAMS AND ALBERT J. GREENBERG.* *Depts. of Anatomy and Medicine, Univ. of Minnesota, Minneapolis.*

1157. Protective action of sulfa drugs against CCl_4 poisoning in mice. J. WALTER WILSON, ELIZABETH H. LEDUC AND LOIS E. ARNOLD (introduced by H. S. N. GREENE). *Dept. of Biology, Brown Univ., Providence, R. I.*

1158. Influence of crystalline vitamin B_{12} on carbon tetrachloride poisoning. CHARLES W. MUSHETT. *Merck Inst. for Therapeutic Research, Rahway, N. J.*

1159. Quantitative relations between acute hepatic necrosis and survival in rabbits. GORDON VAWTER,* GEORGE M. HASS AND C. BRUCE TAYLOR.* *Rush Lab. of Pathology, Presbyterian Hospital and Univ. of Illinois College of Medicine, Chicago.*

1160. Study of choline deficiency in rhesus monkey. LOUIS D. GREENBERG* AND JAMES F. RINEHART. *Division of Pathology, Univ. of California School of Medicine, San Francisco.*

1161. Histological and biochemical changes in fatty livers with and without necrosis. DIETER KOCH-WESER,* EMMANUEL FARBER,* PAUL B. SZANTO* AND HANS POPPER. *Hektoen Inst. for Med. Research and Dept. of Pathology of Cook County Hospital and Northwestern Univ. Med. School, Chicago, Ill.*

1162. Influence of steroid hormones on fatty livers. EMMANUEL FARBER,* DIETER KOCH-WESER* AND HANS POPPER. *Hektoen Inst. for Med. Research and Dept. of Pathology of Cook County Hospital and Northwestern Univ. Med. School, Chicago, Ill.*

1163. Deficiency of alpha cells of pancreas as possible etiological factor in familial hypoglycemosis. IRVINE MCQUARRIE, E. T. BELL, BERNARD ZIMMERMAN* AND W. S. WRIGHT.* *Univ. of Minnesota, Minneapolis.*

1164. Effects of adrenal steroids in adrenalectomized phloridzinized rats. ALBERT SEGALOFF AND ANNE S. MANY.* *Dept. of Medicine, Tulane Univ. and the Alton Ochsner Med. Fndn., New Orleans, La.*

1165. Cytochemical changes in the adrenal cortex of the rat following the administration of cortisone. ROBERT B. STEBBINS (introduced by H. C. STOERK). *Merck Inst. for Therapeutic Research, Rahway, N. J.*

THURSDAY, APRIL 20, 1:30 P.M.

Blood and Tissue Proteins

ROOM F

F. S. Robscheit-Robbins, *Chairman*

1166. Alterations of cytoplasmic basophilia in liver injury and its relation to serum proteins. PAUL B. SZANTO,* HANS POPPER, DIETER KOCH-WESER* AND J. DE LA HUERGA.* *Hektoen Inst. for Med. Research and Dept. of Pathology of Cook County Hospital and Northwestern Univ. Med. School, Chicago, Ill.*

1167. Protein loss by complete drainage of intestinal lymph. J. L. BOLLMAN, E. V. FLOCK. *Division of Exper. Medicine, Mayo Clinic, Rochester, Minn.*

1168. Excretion and tissue distribution of C^{14} following intravenous injection of labeled plasma proteins. C. L. YUILE, B. G. LAMSON,* L. B. ANDERSON, JR.* AND G. H. WHIPPLE. *Dept. of Pathology, Univ. of Rochester, School of Medicine and Dentistry, Rochester, N. Y.*

1169. Chronic exposure of adult mice to $C^{14}O_2$. DONALD L. BUCHANAN (introduced by SIMON BLACK). *Biology Division, Argonne Natl. Lab., Chicago, Ill.* (Biochem.).

1170. Rate of clearance from blood of ^{131}I tagged plasma; determinations of cell and plasma volumes with radioisotopes and Evans blue. L. WISH,* R. H. STOREY* AND J. FURTH. *Oak Ridge Natl. Lab., Biology Division, Oak Ridge, Tenn.*

1171. Comparison of protein and electrolyte changes in tissues during shock from burns and tourniquet trauma. CHARLES L. FOX, JR. (introduced by A. R. DOCHEZ). *Dept. of Bacteriology, College of Physicians and Surgeons, Columbia Univ., New York City.*

1172. Use of rat-repletion method for evaluation of amino acid solutions and protein hydrolysates. P. R. CANNON, L. E. FRAZIER* AND R. HUGHES.* *Dept. of Pathology, Univ. of Chicago, Chicago, Ill.*

1173. Adenosinase, adenase and xanthine oxidase of lymphoid tissues. BERNARD M. WAGNER* AND WILLIAM E. EHRICH. *Philadelphia General Hospital and Graduate School of Medicine, Univ. of Pennsylvania, Philadelphia.*

1174. Lipo-protein of Gaucher's Disease. L. L. UZMAN (introduced by S. FARBER). *Children's Med. Center, Boston, Mass.*

1175. Sickling processes in anemia and trait erythrocytes with electron microscopy of their incipient crystallization. J. W. REBUCK, R. M. STURROCK AND E. A. MONAGHAN (introduced by F. W. HARTMAN). *Dept. of Labs., Henry Ford Hospital, Detroit, Mich.*

THURSDAY, APRIL 20, 4:30 P.M.

Pathology Business Meeting

ROOM F

Papers Read by Title

1176. Association of mitochondria with the cyclophorase system. JOHN W. HARMAN (introduced by D. MURRAY ANGEVINE), *Dept. of Pathology, Univ. of Wisconsin Med. School, Madison.*

1177. Generalized metastatic calcification combined with vascular changes produced by diet. DOROTHY NELSON,* ANDREW C. IVY, PAUL B. SZANTO* AND HANS POPPER. *Dept. of Clinical Science of Univ. of Illinois College of Medicine and Hektoen Inst. for Med. Research, Chicago, Ill.*

1178. Sex differences in skeletal development of mice fed a high fat diet. MARTIN SILBERBERG AND RUTH SILBERBERG. *Snodgras Lab., City Hospital, and Dept. of Pathology, Washington Univ. School of Medicine, St. Louis, Mo.*

1179. Strain differences in skeletal growth and ageing of mice fed a high fat diet. RUTH SILBERBERG AND MARTIN SILBERBERG. *Snodgras Lab., City Hospital and Dept. of Pathology, Washington Univ. School of Medicine, St. Louis, Mo.*

AMERICAN INSTITUTE OF NUTRITION

Fourteenth Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Vitamin A; Tocopherol; Ascorbic Acid; Unidentified Factors

ROOM A

C. G. King, *Chairman*

1180. Studies on vitamin A deficiency in the mouse. PATRICIA MCCARTHY* AND LEOPOLD R. CERECEDO. *Dept. of Biochemistry, Fordham Univ., New York City.*

1181. Effects of dietary supplements on plasma tocopherol levels and vitamin E deficiency symptoms in chicks. LEONA ZACHARIAS, PAUL GOLDHABER AND V. EVERETT KINSEY (introduced by FREDRICK J. STARE). *Massachusetts Eye and Ear Infirmary and Harvard Med. School, Boston.*

1182. Effect of dietary level of tocopherols on their metabolism in swine. J. W. BRATZLER,* J. K. LOOSLI, V. N. KRUKOVSKY* AND L. A. MAYNARD. *Depts. of Animal Husbandry, Dairy Industry and Biochemistry and Nutrition, Cornell Univ., Ithaca, N. Y.*

1183. Interactions between ascorbic acid and plasma and amino acids: failure to find bound ascorbic acid in plasma. FREDERICK SARGENT, II AND RALPH GOLDEN (introduced by R. E. JOHNSON). *Army Med. Nutrition Lab., Chicago, Ill.*

1184. Comparison of the 2,6-dichlorophenolindophenol and 2,4-dinitrophenylhydrazine methods with the Crampton bioassay for determining vitamin C values in foods. ELIZABETH M. HEWSTON,* MURRAY FISHER* AND ELSA ORENT-KEILES. *Bureau of Human Nutrition and Home Economics, USDA, Beltsville, Md.*

1185. Ascorbic and glucuronic acids as growth factors in chicks. MARY ELIZABETH REID. *Exper. Biology and Medicine Inst., NIH, Bethesda, Md.*

1186. Occurrence of dehydro-l-ascorbic and diketo-l-gulonic acid in the blood. SHIH DZUNG CHEN* AND CECILIA SCHUCK. *Nutrition Lab., Purdue Univ., Lafayette, Ind.*

1187. Metabolism of ascorbic acid in rats. I. Influence of age and diet. DOROTHY A. EHMKE,* BESSIE L. DAVEY* AND E. NEIGE TODHUNTER. *Research Lab. of Human Nutrition, Univ. of Alabama, University.*

1188. Vitamin C nutrition of the aged. M. H. BROOKES, K. HEITSHU* AND M. J. ALLEN.* *Dept. of Home Economics, Univ. of Chicago, Chicago, Ill.*

1189. Quantitative estimation of the effect of rutin on the biological potency of vitamin C. EARLE W. CRAMPTON AND LEWIS E. LLOYD.* *Dept. of Nutrition, Macdonald College, McGill Univ., Quebec, Canada.*

1190. Unidentified factor for mink present in hog intestinal mucosa. S. B. TOVE,* R. J. LALOR* AND C. A. ELVEHJEM. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

1191. Possible new factor distilled from lard. HANS KAUNITZ, CHARLES A. SLANETZ* AND RUTH ELLEN JOHNSON.* *Depts. of Pathology and Animal Care, College of Physicians and Surgeons, Columbia Univ., New York City.* (Path.).

1192. Blood changes in guinea pigs during deficiency of the anti-stiffness factor. VIRGINIA WEIMAR* AND ROSALIND WULZEN. *Dept. of Zoology, Oregon State College, Corvallis.* (Physiol.)

TUESDAY, APRIL 18, 1:30 P.M.

Thiamine; Riboflavin; Pyridoxine; Pantothenic Acid

ROOM A

A. H. Smith, *Chairman*

1193. Deposition of thiamine, riboflavin and pantothenic acid in placental and fetal tissues as a basis for estimating vitamin requirements for normal reproduction in rats. MARGARET BARRETT,* HARVYE LEWIS* AND GLADYS EVERSON. *Nutrition Lab., Home Economics Section, Iowa Agricultural Exper. Station, Iowa State College, Ames.*

1194. Electrolyte changes in thiamine deficiency. LOUIS J. PECORA (introduced by FLOYD S. DAFT) *Exper. Biology and Medicine Inst., NIH, Bethesda, Md.*

1195. Studies on the requirements of the mouse for some of the B vitamins. JOHN J. TRAVERS*

AND LEOPOLD R. CERECEDO. *Dept. of Biochemistry, Fordham Univ., New York City.*

1196. Chronic riboflavin deficiency in cebus monkeys. GEORGE V. MANN AND PATRICIA L. STEVENS (introduced by FREDRICK J. STARE). *Dept. of Nutrition, Harvard School of Public Health and Dept. of Biological Chemistry, Harvard Med. School, Boston, Mass.*

1197. Regression of lymphosarcoma transplants following the administration of cortisone to riboflavin deficient mice. GLADYS A. EMERSON, ELIZABETH WURTZ* AND MARY E. ZANETTI.* *Merck Inst. for Therapeutic Research, Rahway, N. J.*

1198. Riboflavin deficiency in dogs produced by 2-acetylaminofluorene. JAMES B. ALLISON AND ARTHUR W. WASE.* *Bureau of Biological Research, Rutgers Univ., New Brunswick, N. J.*

1199. Human digestibility studies suggesting unexpected limitations in the use of certain common foods as sources of riboflavin. GLADYS EVERSON, ELINOR PEARSON* AND ROBERTHA MATTESON.* *Nutrition Lab., Home Economics Section, Iowa Agricultural Exper. Station, Iowa State College and U. S. Bureau of Human Nutrition and Home Economics, Beltsville, Md.*

1200. Effect of oral administration of streptomycin on B vitamin excretion in man. HERBERT P. SARETT AND GRACE A. GOLDSMITH. *Nutrition Research Lab., Tulane Univ. School of Medicine, New Orleans, La.*

1201. Pyridoxine deficiency in the human being. SELMA E. SNYDERMAN,* ROSARIO CARRETERO* AND L. EMMETT HOLT, JR. *Dept. Pediatrics, College of Medicine, New York Univ., New York City.*

1202. Effect of pyridoxine deprivation on amino acid metabolism in rats. J. R. BEATON,* R. M. BALLANTYNE,* R. E. LAU,* A. STECKLEY* AND E. W. MCHENRY. *Dept. of Public Health Nutrition, Univ. of Toronto, Toronto, Canada.*

1203. Pyridoxine and fats in metabolism. HENRY SHERMAN,* LAURA M. CAMPLING* AND ROBERT S. HARRIS. *Nutritional Biochemistry Lab., Massachusetts Inst. of Technology, Cambridge.*

1204. Utilization of pantothenic acid conjugate (PAC) for rat growth. TSOO E. KING,* FRANK M. STRONG* AND VERNON H. CHELDELIN. *Dept. of Biochemistry and Enzyme Inst., Univ. of Wisconsin, Madison.*

TUESDAY, APRIL 18, 4:30 P.M.

Nutrition Business Meeting

ROOM A

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

WEDNESDAY, APRIL 19, 9:00 A.M.

Proteins, Amino Acids

ROOM A

H. B. Lewis, *Chairman*

1205. Liberation of amino acids and active peptides from raw, heated, and vitamin-free casein by tryptic digestion. ROYAL A. SULLIVAN, WILLIAM E. DOWNEY, ELIZABETH K. STANTON, ELIZABETH VAN WAGONER AND MARY JANE HANSELL (introduced by L. K. RIGGS) *National Dairy Research Labs., Inc., Oakdale, New York City.* (Biochem.)

206. Influence of dietary protein on egg proteins. FRANK A. CSONKA. *Bureau of Human Nutrition and Home Economics, Agricultural Research Admin., USDA, Washington, D. C.* (Biochem.)

1207. Influence of low levels of protein on heat production. ALEX BLACK, K. H. MADDY* AND R. W. SWIFT. *Dept. of Animal Nutrition, Pennsylvania State College, State College.*

1208. Fat deposition and nitrogen metabolism in four strains of mice. PAUL F. FENTON AND CLAIRE J. CARR.* *Dept. of Biology, Brown Univ., Providence, R. I.*

1209. Role of fat in protein metabolism. CECILE HOOVER* AND PEARL SWANSON. *Nutrition Lab., Iowa Agricultural Exper. Station, Iowa State College, Ames.*

1210. Diminished ACTH production in rats on low protein diets; explanation of the relationship between dietary protein and renal hypertension. PHILIP HANDLER AND FREDERICK BERNHEIM.* *Depts. of Biochemistry and Nutrition and Physiology and Pharmacology, School of Medicine, Duke Univ., Durham, N. C.*

1211. Effect of tryptophane depletion and repletion on enzyme activities of tissues of the chick. WALTER C. RUSSELL, M. WIGHT TAYLOR AND I. WILLIAM LANE.* *Dept. of Agricultural Biochemistry, New Jersey Agricultural Exper. Station, Rutgers Univ., State Univ. of New Jersey, New Brunswick.*

1212. Lysine deficiency in rats fed zein diets. W. A. KREHL AND DAVID KLIGLER.* *Yale Nutrition Lab., Dept. of Physiological Chemistry, Yale Univ., New Haven, Conn.*

1213. Lysine requirement for growing swine. M. J. BRINEGAR,* H. H. WILLIAMS, J. K. LOOSLI AND L. A. MAYNARD. *Depts. of Animal Husbandry, Biochemistry and Nutrition, Cornell Univ., Ithaca, N. Y.*

1214. Importance of the time factor upon utilization of amino acids in 'maintenance' of adult rats. E. GEIGER AND E. B. HAGERTY (introduced by HARRY J. DEUEL). *Dept. of Pharmacology, Univ. of Southern California, Med. School, Los Angeles, and Van Camp Seafood Co., Terminal Island, Calif.*

1215. Nitrogen balance index of adult rats fed amino acid mixtures low in valine. E. S. NASSET AND JOSEPH T. ANDERSON.* *Dept. of Physiology and Vital Economics, School of Medicine and Dentistry, Univ. of Rochester, Rochester, N. Y.*

1216. Methionine deficiency by force-feeding. J. N. WILLIAMS, JR.,* A. E. DENTON,* FUNG-HAAN FUNG* AND C. A. ELVEHJEM. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Vitamin B_{12}

ROOM A

F. S. Daft, *Chairman*

1217. Relation of vitamin B_{12} to vitamin E in the nutrition of young rats. E. L. HOVE AND J. O. HARDIN.* *Lab. of Animal Nutrition, Alabama Polytechnic Inst., Auburn.*

1218. Significance of vitamin B_{12} in milk diets. R. A. COLLINS,* L. S. DIETRICH* AND C. A. ELVEHJEM. *Dept. of Biochemistry, College of Agriculture, Univ. of Wisconsin, Madison.*

1219. Vitamin B_{12} and folic acid for reproduction and lactation. BARNETT SURE. *Dept. of Agricultural Chemistry, Univ. of Arkansas, Fayetteville.*

1220. Vitamin B_{12} and liver protein regeneration. HARRY M. VARS, GORDON M. KARN* AND COLIN C. FERGUSON.* *Harrison Dept. of Surgical Research, School of Medicine, Univ. of Pennsylvania, Philadelphia.*

1221. Metabolism of cobalt 56 in the hen's ovary. H. H. DARBY (introduced by E. M. NELSON). *Dept. of Terrestrial Magnetism, Carnegie Inst. of Washington, Washington, D. C.*

1222. Vitamin B_{12} content of chick tissues as influenced by the diet. J. R. COUCH, ORLANDO OLCESE AND H. L. GERMAN (introduced by L. R. RICHARDSON). *Depts. of Biochemistry and Nutrition and Poultry Husbandry, Agricultural and Mechanical College of Texas, College Station.*

1223. Effect of various amino acids and vitamin B_{12} on chick growth. L. J. MACHLIN,* J. L. MILLIGAN,* C. A. DENTON* AND H. R. BIRD. *Bureau of Animal Industry, USDA, Beltsville, Md.*

1224. Role of B_{12} on nitrogen retention of rats fed on soy bean protein diets at different caloric levels. BACON F. CHOW AND LOIS BARROWS.* *Dept. of Biochemistry, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md.*

1225. Quantitative vitamin B_{12} requirement of the pig. R. O. NESHEIM* AND B. CONNOR JOHNSON. *Division of Animal Nutrition, Univ. of Illinois, Urbana.*

1226. Role of vitamin B_{12} and methyl donors in lipotropism and transmethylation in the rat and chick. A. E. SCHAEFER,* W. D. SALMON AND D. R. STRENGTH.* *Lab. of Animal Nutrition, Alabama Polytechnic Inst., Auburn.*

1227. Effects of protein level, vitamin B_{12} and folacin in utilization of methionine for transmethylation. W. D. SALMON. *Lab. of Animal Nutrition, Alabama Polytechnic Inst., Auburn.*

WEDNESDAY, APRIL 19, 6:30 P.M.

American Institute of Nutrition Dinner

Presentation of Awards

HOTEL MADISON

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Folid Acid; Biotin; Lipids

ROOM A

T. H. Jukes, *Chairman*

1228. Nutritional status of pteroylglutamic acid in persons with leukemia. MARIAN E. SWENDSEID, ANN L. SWANSON, STANLEY MILLER AND FRANK H. BETHELL (introduced by HOWARD B. LEWIS). *Thomas Henry Simpson Memorial Inst. for Med. Research, Univ. of Michigan, Ann Arbor.*

1229. Folic acid metabolism in normal human subjects. LURA MAE ODLAND* AND HELEN T. PARSONS. *Dept. of Home Economics, Univ. of Wisconsin, Madison.*

1230. Maternal nutrition and hydrocephalus in infant rats. B. L. O'Dell* and A. G. Hogan. *Dept. of Agricultural Chemistry, Univ. of Missouri, Columbia.*

1231. Inhibition of chick bone marrow choline oxidase by aminopterin in vivo. James S. Dinning,* Cecilia K. Keith* and Paul L. Day. *Dept. of Biochemistry, School of Medicine, Univ. of Arkansas, Little Rock.*

1232. Physiological and histological changes in the folic-acid deficient duckling. O. Neal Miller, J. W. Goddard and Robert E. Olson (introduced by Fredrick J. Stare). *Dept. of Nutrition, Harvard School of Public Health, Boston, Mass.*

1233. Folic acid-derived growth factor for *Leuconostoc citrovorum* in human urine. R. M. Anker,* J. W. Boehne* and Arnold D. Welch. *Dept. of Pharmacology, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

1234. Response of *Leuconostoc citrovorum* to tryptic digests of casein. Charles A. Nichol* and Arnold D. Welch. *Dept. of Pharmacology, School of Medicine, Western Reserve Univ., Cleveland, Ohio.*

1235. Excretion studies of biotin in the urine and feces of normal and protein-depleted rats. Robert L. Davis* and Bacon F. Chow. *Dept. of Biochemistry, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Md.*

1236. Inactivation of biotin by hydrochloric acid. A. E. Axelrod and Klaus Hofmann.* *Inst. of Pathology, Western Pennsylvania Hospital and Dept. of Chemistry, Univ. of Pittsburgh, Pittsburgh.*

1237. Microbiological characterization of biocytin. Lemuel D. Wright, Emlen L. Cresson,* Katherine Valentik* and Helen R. Skeggs.* *Med. Research Division, Sharp and Dohme, Inc., Glenolden, Pennsylvania.*

1238. Interrelation of linolenate and linoleate in growth studies on rats. Samuel M. Greenberg,* Clarence M. Calbert,* Evelyn E. Savage* and Harry J. Deuel, Jr. *Dept. of Biochemistry and Nutrition, Univ. of Southern California, Los Angeles.*

1239. Spectrographic evidence of deficiency of unsaturated fatty acids in serum and tissues of dogs on a low fat diet. Hilda F. Wiese,* Ralph T. Holman* and Arild E. Hansen. *Dept. of Pediatrics, Univ. of Texas Med. Branch, Galveston, and Dept. of Biochemistry and Nutrition, A and M College of Texas, College Station.*

Thursday, April 20, 1:30 P.M.

Symposium on Nutritional Appraisal of Human Subjects

ROOM E

W. H. Sebrell, Jr., *Chairman*

1. Evaluation of symptoms and signs of deficiency disease. William J. Darby. *Vanderbilt Univ. Med. School, Nashville, Tenn.*
2. Signs of malnutrition seen in Newfoundland. Russell M. Milder. *Mayo Clinic, Rochester, Minn.*
3. Laboratory appraisal of nutritional status. Otto A. Bessey. *Univ. of Illinois Med. School, Chicago.*
4. Evaluation of dietary survey methods. L. A. Maynard. *Cornell Univ., Ithaca, N. Y.*
5. Statistical appraisal of nutritional data. Dorothy Wiehl. *Milbank Memorial Fund, New York City.*

Thursday, April 20, 4:30 P.M.

Nutrition Business Meeting

ROOM A

Friday, April 21, 9:00 A.M.

Human Nutrition; General

ROOM A

J. M. Orten, *Chairman*

1240. Variations in nitrogen-balance data on college girls. Beula V. McKey,* Dolores Maloney Corey* and Janice M. Smith. *Agricultural Exper. Station, Dept. of Home Economics, Univ. of Illinois, Urbana.*

1241. Protein metabolism in chronic illness. Effect of protein supplementation on nitrogen balance, hemoglobin, serum proteins and weight in the malnourished and the effect of the nutritional status on nitrogen storage. S. O. Waife, Michael G. Wohl, John G. Reinhold (introduced by James H. Jones). *Nutrition Project and Dept. of Medicine, Philadelphia General Hospital, Philadelphia, Pa.*

1242. Urinary loss of amino acids in normal and undernourished males following a single injection of an amino acid mixture. Stanley Levey, Ellen D. Hoganson and John E. Harroun (introduced by Arthur H. Smith). *Dept. of Physiological Chemistry, Wayne Univ. College of Medicine, Detroit and Wayne County General Hospital, Eloise, Mich.*

1243. Nutritional factors in the incidence of complications of pregnancy. Nevin S. Scrimshaw, Roy B. Greer,* Ruth L. Goodland* and Margaret Moen. *School of Medicine and Dentistry, Univ. of Rochester, Rochester, N. Y.*

1244. Amino acid intakes and excretions of primigravidae on self selected diets. BERNICE BLUM SHEFT,* HELEN OLDHAM AND THELMA PORTER. *Dept. of Home Economics, Univ. of Chicago, Chicago, Ill.*

1245. Effects of vitamin therapy on school children. H. B. PIERCE, R. F. KRAUSE,* J. H. BROWE,* SUSAN B. MERROW* AND C. A. NEWHALL.* *Depts. of Biochemistry and Anatomy, College of Medicine, Univ. of Vermont, Burlington*

1246. Nutrient intake and serum blood levels of children showing physical signs of vitamin deficiencies. SUSAN B. MERROW,* R. F. KRAUSE,* J. H. BROWE,* C. A. NEWHALL* AND H. B. PIERCE. *Depts. of Biochemistry and Anatomy, College of Medicine, Univ. of Vermont, Burlington.*

1247. Acetylation of PABA and of sulfadiazine by human subjects. HERBERT GERSHBERG,* W. JAMES KUHL* AND ELAINE P. RALLI. *Lab. of the Dept. of Medicine, College of Medicine, New York Univ., New York City.*

1248. Acetylation studies in patients with rheumatoid arthritis. W. JAMES KUHL,* HERBERT GERSHBERG* AND ELAINE P. RALLI. *Lab. of of the Dept. of Medicine, College of Medicine, New York Univ., New York City.*

1249. Effect of rich, bulky, and poor diets on fertility in rats. ANTON J. CARLSON AND FREDERICK HOELZEL.* *Dept. of Physiology, Univ. of Chicago, Chicago, Ill.*

1250. Effect of some human-type diets upon the growth and health of the laboratory rat. ELIZABETH CROFTS CALLISON, ELSA ORENT-KEILES AND RACHEL UHVITS MAKOWER.* *Bureau of Human Nutrition and Home Economics, USDA, Beltsville, Md.*

1251. Influence of previous diet on the metabolism of rat diaphragm. R. G. HANSEN,* W. J. RUTTER* AND L. T. SAMUELS. *Dept. of Biological Chemistry, College of Medicine, Univ. of Utah, Salt Lake City.*

1252. Enzymic approach to the determination of crude fiber. A. WEINSTOCK AND G. HARVEY BENHAM (introduced by MARTIN E. HANKE). *Dept. of Biology, Illinois Inst. of Technology, Chicago.* (Biochem.)

FRIDAY, APRIL 21, 1:30 P.M.

General

ROOM A

H. J. Deuel, Jr., *Chairman*

1253. Effect of surface active agents when fed in the diets of rats. ROBERT S. HARRIS, HENRY SHERMAN* AND WALTER W. JETTER.* *Massachusetts Inst. of Technology and Boston Univ. School of Medicine, Boston.*

1254. Effects of surface active agents when fed in the diet of hamsters. HENRY SHERMAN,* ROBERT S. HARRIS AND WALTER W. JETTER.* *Massachusetts Inst. of Technology, Cambridge and Boston Univ. School of Medicine, Boston.*

1255. Effect of feeding polyoxyethelene monosterate preparations on the growth rate and gross pathology of weanling hamsters. B. S. Schweigert,* B. H. MCBRIDE* AND A. J. CARLSON. *Division of Biochemistry and Nutrition, American Meat Inst. Fndn., Dept. of Biochemistry and Dept. of Physiology, Univ. of Chicago, Chicago, Ill.*

1256. Use of mealworm, *Tenebrio molitor*, in nutritional studies. G. FRAENKEL. *Dept. of Entomology, Univ. of Illinois, Urbana.*

1257. Nutritional status of mice and their susceptibility to infection with *Shigella dysenteriae*. EUGENE M. SPORN, EDWARD J. SCHANTZ AND FRANK B. ENGLEY, JR. (introduced by ALDEN K. BOOR). *Camp Detrick, Frederick, Md.* (Biochem.)

1258. Study of the use of chromium oxide as an indicator of digestibility. E. A. KANE,* W. C. JACOBSON* AND L. A. MOORE. *Division of Nutrition and Physiology, Bureau of Dairy Industry, Agricultural Research Admin., USDA, Washington, D. C.*

1259. Capillary fragility and vitamin P protective action against radiation. BORIS SOKOLOFF, JAMES B. REDD AND RAYMOND DUTCHER (introduced by WALTER H. EDDY). *Southern Bio-Research Lab., Florida Southern College, Lakeland.*

1260. Effect of dietary restriction and rehabilitation on the sodium, potassium and chloride of the skin and total carcass of male rats. RUTH CLAYTON AND ESTHER DACOSTA (introduced by CARL J. KOEHN). *U. S. Army Med. Nutrition Lab., Chicago, Ill.*

1261. Effect of dietary restriction and rehabilitation on the weight of the adrenal gland of the male albino rat. ESTHER DACOSTA AND RUTH CLAYTON (introduced by CARL J. KOEHN). *U. S. Army Med. Nutrition Lab., Chicago, Ill.*

Papers Read by Title

1262. Failure of folic acid or xanthopterin to replace thiamine in mice and rats maintained on a thiamine deficient diet. ALBERT J. EUSEBI* AND LEOPOLD R. CERECEDO. *Dept. of Biochemistry, Fordham Univ. New York City.*

1263. Nutritional requirements of Syrian hamster for growth. HUMBERTO GRANADOS* AND HENRIK DAM. *Dept. of Biology, Polytechnic Inst., Copenhagen, Denmark.*

1264. Improvement in nutritive value of milled rice. MARINUS C. KIK. *Univ. of Arkansas, Fayetteville.*

1265. Studies on lactalbumin heated with carbohydrate. IVAN J. MADER,* LAWRENCE J. SCHROEDER* AND ARTHUR H. SMITH. *Dept. of Physiological Chemistry, College of Medicine, Wayne Univ., Detroit, Mich.*

1266. Niacin, biotin and folic acid in the nutrition of the mouse. EUGENE M. SPORN AND EDWARD J. SCHANTZ (introduced by HAROLD P. MORRIS). *Camp Detrick, Frederick, Md.*

THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS

Thirty-fourth Annual Meeting

An asterisk * following an author's name denotes "by invitation"

TUESDAY, APRIL 18, 9:00 A.M.

Viruses

ROOM 6

Thomas Francis, Jr., *Chairman*

1267. Inhibitory and enhancing effects of secretions of the human respiratory tract on influenza virus. HARRY M. ROSE. *Depts. of Medicine and Bacteriology, Columbia Univ., College of Physicians and Surgeons, New York City.*

1268. Stability of egg white inhibitor of influenza virus hemagglutination in relation to the preparation of a local standard of inhibitory activity. FRANK LANNI, YVONNE THÉRY LANNI* AND J. W. BEARD. *Dept. of Surgery, Duke Univ. School of Medicine, Durham, N. C.*

1269. Sorption of influenza virus by chicken erythrocytes. THOMAS P. MAGILL. *Dept. of Microbiology and Immunology, Long Island College of Medicine, Brooklyn, N. Y.*

1270. Reciprocal neutralization tests with four strains of poliomyelitis virus. HOWARD A. HOWE. *Poliomyelitis Research Center, Dept. of Epidemiology, Johns Hopkins Univ., Baltimore, Md.*

1271. Second attacks of poliomyelitis in human beings, in relation to immunity. DAVID BODIAN AND HOWARD A. HOWE. *Poliomyelitis Research Center, Dept. of Epidemiology, Johns Hopkins Univ., Baltimore, Md.*

1272. Relationship between Serum Antibodies and Carrier state to poliomyelitis. GORDON C. BROWN AND JOHN D. AINSLIE.* *Dept. of Epidemiology and Virus Lab., School of Public Health, Univ. of Michigan, Ann Arbor.*

1273. Social serology: antibody levels in a normal young population during an epidemic of poliomyelitis. JOSEPH L. MELNICK AND NADA LEDINKO.* *Section of Preventive Medicine, Yale Univ. School of Medicine, New Haven, Conn.*

1274. Formation of neutralizing antibodies in monkeys after the injection of poliomyelitis virus and adjuvants. ROBERT WARD,* DORA RADER,* MURRAY M. LIPTON* AND JULES FREUND. *Dept. of Pediatrics, New York Univ. Med. Center and Public Health Research Inst. of The City of New York, Inc., New York City.*

1275. Presidential Address. THOMAS FRANCIS, JR.

TUESDAY, APRIL 18, 1:30 P.M.

Viruses

ROOM 6

Thomas Francis, Jr. *Chairman*

1276. Diagnostic tests with Albany, type I and II Coxsackie (Dalldorf) virus. PETER K. OLITSKY, J. CASALS* AND L. C. MURPHY. *Rockefeller Inst. for Med. Research, New York City.*

1277. Plate complement fixation test and its application to the Coxsackie viruses. LISBETH M. KRAFT* AND JOSEPH L. MELNICK. *Section of Preventive Medicine, Yale Univ. School of Medicine, New Haven, Conn.*

1278. Antibody in yolk of eggs and in serum from hens inoculated with viruses of influenza and poliomyelitis. JONAS E. SALK AND J. S. YOUNGNER.* *Virus Research Lab., Dept. of Bacteriology, Univ. of Pittsburgh School of Medicine, Pittsburgh, Pa.*

1279. Serological studies on infectious mononucleosis and virual hepatitis with human erythrocytes modified by different strains of Newcastle disease virus. ALFRED S. EVANS (introduced by JOHN R. PAUL). *Section of Preventive Medicine, Yale Univ. School of Medicine, New Haven, Conn.*

1280. Hemagglutination by meningopneumonitis virus and its inhibition by immune sera. D. A. HAIG* AND M. R. HILLEMAN. *Dept. of Virus and Rickettsial Diseases, Army Med. Dept. Research and Graduate School, Washington, D. C.*

1281. Enumeration of elementary particles of the virus of meningo-pneumonitis. T. TIMOTHY CROCKER (introduced by JOSEPH L. MELNICK). *Dept. of Physiological Chemistry and Section of Preventive Medicine, Yale Univ. School of Medicine, New Haven, Conn.*

1282. Newcastle disease virus encephalitis in rhesus monkeys. H. A. WENNER, A. MONLEY AND R. N. TODD (introduced by ANNABEL WALTER). *Hixon Memorial Lab., Univ. of Kansas School of Medicine, Kansas City.*

1283. Applications of protamine precipitation in the purification of certain viruses. J. WARREN, M. L. WEIL,* S. B. RUSS* AND M. JEFFRIES.*

Dept. of Virus and Rickettsial Diseases, Army Med. Dept. Research and Graduate School, Washington, D. C.

1284. High intensity electrons as a tool for preparation of vaccines. I. Preparation of rabies vaccine. ULRICH FRIEDEMANN[1], FREDERICK B. TRAUB, AND WOLFGANG HUBER * *Dept. of Bacteriology, Jewish Hospital of Brooklyn, and Research Labs., Electronzied Chemicals Corp., Brooklyn, N. Y.*

1285. Relation between propagation of a mouse encephalomyelitis virus and uptake of radiophosphate by minced brain from mice of different ages. HAROLD E. PEARSON, RICHARD J. WINZLER* AND MAX E. RAFELSON.* *Depts. of Biochemistry and Microbiology, Univ. of Southern California School of Medicine and Lab. Division, Los Angeles County Hospital, Los Angeles, Calif.*

TUESDAY, APRIL 18, 8:00 P.M.

Joint Session of the Federation

BALLROOM

Program on page 402

WEDNESDAY, APRIL 19, 9:00 A.M.

Antigens

ROOM 6

1286. Properties of partially purified scarlet fever (erythrogenic) toxin prepared by various methods. AARON H. STOCK AND ETHEL VERNEY.* *Dept. of Pathology and Bacteriology, Children's Hospital of Pittsburgh, Univ. of Pittsburgh School of Medicine, Pittsburgh, Pa.*

1287. Active immunization of mice against experimental infection with type I Meningococci. H. W. SCHERP. *Dept. of Bacteriology, Univ. of Rochester School of Medicine and Dentistry, Rochester, N. Y.*

1288. Immunological studies on Vi antigen from V form species of salmonella. MAURICE LANDY* AND H. C. BATSON. *Dept. of Biologic Products, Army Med. Dept. Research and Graduate School, Washington, D. C.*

1289. Toxic component of Shigella paradysenteriae. CHLOE TAL* AND WALTHER F. GOEBEL. *Rockefeller Inst. for Med. Research, New York City.*

1290. Immunochemical studies on species differences among blood group A substances. ELVIN A. KABAT, HAROLD BAER,* RICHARD L. DAY* AND VESTA KNAUB.* *Depts. of Neurology, Bacteriology and Pediatrics, Columbia Univ. College of Physicians and Surgeons and Neurological Inst. and Babies Hospital, Presbyterian Hospital, New York City.*

1291. Immunochemical studies on cattle blood group substances. SAM M. BEISER* AND ELVIN A. KABAT. *Depts. of Bacteriology and Neurology, Columbia Univ. College of Physicians and Surgeons, and Neurological Inst., Presbyterian Hospital, New York City.*

1292. Quantiative studies of complement fixation. Complement-fixing potency of immune sera in relation to antibody nitrogen content. A. G. OSLER, A. L. WALLACE* AND M. M. MAYER. *Dept. of Bacteriology, Johns Hopkins School of Hygiene and Public Health, Baltimore, Md.*

1293. Further studies on the kinetics of immune hemolysis. MANFRED M. MAYER, CHARLES C. CROFT* AND WALTER M. BOWMAN.* *Dept. of Bacteriology, Johns Hopkins School of Hygiene and Public Health, Baltimore, Md.*

1294. Interrelationships of crystalline egg albumin and its deaminated and denatured derivatives. MICHAEL HEIDELBERGER AND PAUL H. MAURER.* *Depts. of Biochemistry and Medicine, Columbia Univ. College of Physicians and Surgeons, New York City.*

1295. Specific protection of the antibody combining site during iodination of antibody. DAVID PRESSMAN AND L. A. STERNBERGER.* *Sloan-Kettering Inst. for Cancer Research, New York City.*

WEDNESDAY, APRIL 19, 1:30 P.M.

Antibodies

ROOM 6

1296. Specific purification of antiprotein antibody. L. A. STERNBERGER* AND DAVID PRESSMAN. *Sloan-Kettering Inst. for Cancer Research, New York City.*

1297. Specific localization of anti-rat-lung serum as determined by the use of radioactive tracers. HERMAN N. EISEN* AND DAVID PRESSMAN. *Sloan-Kettering Inst. for Cancer Research, New York City.*

1298. Effect of sensitization and irradiation on the fate of I^{131}-labelled bovine gamma globulin in rabbits and mice. F. J. DIXON,* G. J. DAMMIN* AND S. C. BUKANTZ. *Depts. of Pathology and Internal Medicine, Washington Univ. School of Medicine, St. Louis.*

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[1] Deceased

1299. Use of I^{131} label for measurement of serum antibody. SIDNEY COHEN (introduced by MONROE J. SCHLESINGER). *Yamins Research Lab., Beth Israel Hospital and Dept. of Medicine, Harvard Med. School, Boston, Mass.*

1300. Lethal effect in hypersensitive guinea pigs of a non-precipitinogenic substance in tuberculins. JANET MCCARTER WOOLLEY (introduced by R. J. DUBOS). *Rockefeller Inst. for Med. Research, New York City.*

1301. A precipitin test for carbohydrate antibodies in human tuberculosis and in leprosy. NINE CHOUCROUN. *Dept. of Public Health and Preventive Medicine, Cornell Univ. Med. College, New York City.*

1302. Response to BCG as an index of genetic resistance to tuberculosis. MAX B. LURIE AND PETER ZAPPASODI.* *Henry Phipps Inst. of Univ. of Pennsylvania, Philadelphia.*

1303. Differences in surface stucture between virulent and avirulent mycobacteria. HUBERT BLOCH. *Public Health Research Inst. of The City of New York, Inc., New York City.*

1304. Lymphocyte origin of a plasma factor responsible for in vitro tuberculin type hypersensitivity. JOSEPH M. MILLER AND CUTTING B. FAVOUR (introduced by J. H. MUELLER). *Med. Clinic, Peter Bent Brigham Hospital, and Dept. of Medicine, Harvard Med. School, Boston, Mass.*

WEDNESDAY, APRIL 19, 7:30 P.M.

Symposium on Coxsackie Group of Viruses

ROOM F

Gilbert Dalldorf, *Chairman*

1. GILBERT DALLDORF. *Division of Laboratories and Research, State of New York, Dept. of Health, Albany.*
2. BEATRICE F. HOWITT. *Division of Labs. and Research, State of New York, Dept. of Health, Albany.*
3. EDWIN D. KILBOURNE. *Rockefeller Inst. for Med. Research, New York City.*
4. JOSEPH L. MELNICK AND LISBETH M. KRAFT. *Section of Preventive Medicine, Yale Univ. School of Medicine, New Haven, Conn.*
5. J. CASALS AND PETER OLITSKY. *Rockefeller Inst. for Med. Research, New York City.*

WEDNESDAY, APRIL 19, 9:30 P.M.

Federation Mixer

ARENA, CONVENTION HALL

THURSDAY, APRIL 20, 9:00 A.M.

Tumors and Allergy

ROOM 6

1305. Structural changes produced in Brown-Pearce carcinoma cells by means of a specific antibody. BERNARD KALFAYAN* AND JOHN G. KIDD. *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1306. Effects of 'sensitized' lymphocytes on transplanted cancer cells. JOHN G. KIDD AND HELENE WALLACE TOOLAN.* *Dept. of Pathology, New York Hospital-Cornell Med. Center, New York City.*

1307. Relationship between serum protein fractions and antibody nitrogen response in diabetes mellitus. JOHN A. FLICK, SIGMUND KETTERER,* MICHAEL G. WOHL* AND S. O. WAIFE* with technical assistance of GEORGE CLOUGH. *Dept. of Bacteriology, School of Medicine, Univ. of Pennsylvania and Philadelphia General Hospital, Philadelphia.*

1308. Antibody production in nutritionally depleted patients. HENRY H. BALCH (introduced by A. M. PAPPENHEIMER, JR.). *Depts. of Surgery and Microbiology, New York Univ. College of Medicine, New York City.*

1309. Role of the spleen in hemolysin production. WILLIAM H. TALIAFERRO AND LUCY G. TALIAFERRO.* *Dept. of Bacteriology and Parasitology, Univ. of Chicago, Chicago, Ill.*

1310. Persistence of antigen. PHILIP D. MCMASTER AND HEINZ KRUSE (introduced by JULES FREUND). *Rockefeller Inst. for Med. Research, New York City.*

1311. Method for enhancement of hypersensitivity to a simple chemical substance (picryl chloride). MERRILL W. CHASE. *Rockefeller Inst. for Med. Research, New York City.*

1312. Studies on allergic encephalomyelitis in dogs. LEWIS THOMAS, P. Y. PATERSON AND ELIZABETH SMITHWICK (introduced by JULES FREUND). *Div. of Infectious Disease, Dept. of Medicine, Tulane Univ. School of Medicine, New Orleans, La.*

1313. Complement-fixing brain antibody in experimental disseminated encephalomyelitis in mice. PETER K. OLITSKY, J. CASALS* AND L. C. MURPHY.* *Rockefeller Inst. for Med. Research, New York City.*

1314. Serological Reactivity of dextran plasma substitute. EDWARD J. HEHRE* AND JOHN Y. SUGG. *Dept. of Bacteriology and Immunology, Cornell Univ. Med. College, New York City.*

THURSDAY, APRIL 20, 7:30 P.M.

Symposium on Growth of Bacterial Virus in the Host Cell

ROOM F

Mark Adams, *Chairman*

1. S. E. Luria. *Dept. of Bacteriology, Univ. of Indiana, Bloomington.*
2. Seymour Cohen. *Children's Hospital, Philadelphia, Pa.*
3. A. H. Doermann, *Natl. Labs., Oak Ridge, Tennessee.*

Thursday, April 20, 1:30 p.m.

Serological Reactions

room 6

1315. Further studies on the role of activated protease and protease-inhibitors in allergic reactions. Kenneth L. Burdon. *Dept. of Microbiology, Baylor Univ. College of Medicine, Houston, Texas.*

1316. Effect of x-irradiation on enteric cholera and coproantibody response in the guinea pig. William Burrows. *Dept. of Bacteriology and Parasitology, Univ. of Chicago and Biology Div., Argonne Natl. Lab., Chicago, Ill.*

1317. Factors aiding in the demonstration of qualitative differences in the virulence enhancing activity of mucin preparations. H. C. Batson and Martha Brown.* *Dept. of Biologic Products, Army Med. Dept. Research and Grad. School, Washington, D.C.*

1318. Antigenic extinction principle in potency testing rabies vaccines. F. W. Trader* and I. W. McLean, Jr. *Research Lab., Parke Davis and Co., Detroit, Mich.*

1319. Immunization experiments with ascaris lumbricoides in rodents. J. F. A. Sprent. *Ontario Research Fndn., Toronto, Canada.*

Thursday, April 20, 4:30 p.m.

Immunology Business Meeting

room 6

Friday, April 21, 9:00 a.m.

Miscellaneous

room 6

1320. Observations on the agglutination of polysaccharide-treated erythrocytes by human tularemia antisera. T. W. Green,* George G. Wright, Mary M. Alexander* and Janet Johnson.* *Biological Dept., Chemical Corps, Camp Detrick, Frederick, Md.*

1321. Complement-fixation tests as an aid in differential diagnosis of extra-intestinal amebiasis. Sara C. McDearman and Wolcott B. Dunham (introduced by Douglas H. Sprunt). *Veterans Administration Med. Teaching Group, Kennedy Hospital, Memphis, Tenn.*

1322. Universal Serologic Reaction in the differentiation of Syphilis and Yaws. Reuben L. Kahn. *Univ. of Michigan Hospital, Ann Arbor.*

1323. Chemical and Immunological studies on lecithin and cardiolipin. Frederick A. H. Rice* and Abraham G. Osler. *Johns Hopkins Univ. and USPHS Research and Post Grad. Training Center.*

1324. Amino Acid inhibition of Theiler's GD VII virus in mouse brain mince. Harold E. Pearson and Richard J. Winzler.* *Depts. of Microbiology and Biochemistry, Univ. of Southern California School of Medicine and Lab. Div., Los Angeles County Hospital, Los Angeles.*

1325. Chemical determination of histamine in blood of infants and children with special reference to rheumatic fever. Paul F. de Gara. *New York Hospital and Dept. of Pediatrics, Cornell Univ. Med. College, New York City.*

1326. Anti-reaginic action of normal rabbit serum. Margo Hasson* and M. Scherago. *Dept. of Bacteriology, Univ. of Kentucky, Lexington.*

1327. Influence of ultraviolet irradiation on antibodies of pollen-allergic man. Mary H. Loveless. *Cornell Univ. Med. College, New York City.*

1328. Observations on factors influencing diagnostic agglutination titration in brucellosis. Richard J. Feinberg,* George G. Wright and Werner Braun.* *Biological Dept., Chemical Corps, Camp Detrick, Frederick, Md.*

1329. Chemical composition of some bacterial pyrogens. Gertrude Rodney and H. B. Devlin (introduced by J. J. Pfiffner). *Research Lab., Parke Davis and Co., Detroit Mich.*

Papers Read by Title

1330. Immunochemical studies of bovine complement. David T. Berman (introduced by M. R Irwin). *Depts. of Veterinary Science and Genetics, Univ. of Wisconsin, Madison.*

1331. Streptococci and related filtrable infective agents in outdoor air during epidemics of influenza and of milder respiratory infections. Edward C. Rosenow. *Bacteriologic Research, Longview Hospital, Cincinnati, Ohio.*

1332. Inhibition of ld-peptidase by tuberculocarbohydrates and its possible significance in the mechanism of the cytotoxic action of tuberculin. Charles Weiss, Marial L. Boyar* and Charlotte H. Scharf.* *Lab., Jewish Hospital, Philadelphia, Pa.*

EXHIBITS

The Scientific and Member Exhibits will be located in the Arena of the Convention Hall. They will be open Monday, 2:00 p.m. to 5:00 p.m.; Tuesday, 9:00 a.m. to 5:00 p.m. and 7:00 p.m. to 9:00 p.m.; Wednesday and Thursday, 9:00 a.m. to 5:00 p.m.

Scientific Exhibits

Abbott Laboratories, North Chicago, Ill. (*Booth 79*). Exhibit of charts and models showing the distribution of S^{35} in radioactive Pentothal in animal tissues and the application of radio paper chromatography to the study of the number and kinds of degradation products in the urine.

Academic Press, Inc., New York City (*Booth 52*). The array of publications is an excellent illustration of the aim of Academic Press to aid research workers in the various fields of science in keeping abreast of all recent developments. Visitors will note the "Advances" series, which have become well established and are published yearly, treatises on *The Hormones, The Alkaloids, Vitamin Methods* and many other definitive works. Photo-offset reproductions of such publications as *Journal of the American Chemical Society* and *Chemical Reviews,* also on display, indicate the scope of activities of the Johnson Reprint Corporation.

A. S. Aloe Company, Saint Louis, Mo. (*Booths 3 and 6*). Exhibit includes New Precision Kymograph with electron stimulator; de Fonbrune Micromanipulator and Micro-Forge; new type moist chamber and oil chamber for Micromanipulator procedure; selected surgical instruments for experimental surgery; Moduline sectional laboratory furniture with stainless steel tops; Gersh Tissue Dehydration Apparatus; and items of general interest to biochemists and physiologists.

American Instrument Company, Inc., Silver Spring, Md. (*Booths 19 and 22*). Exhibit includes Electrophoresis Apparatus, with the latest type cells and accessories; Refrigerated Rotary Warburg with the new type cooling system; new style Refrigerated Incubator, Spectrophotometer, *p*H-Meter, Constant Temperature Water Bath, Pipetting Machine and Electrically-heated Micro-Kjeldahl Apparatus.

American Optical Company, Instrument Division, Buffalo, N. Y. (*Booths 33 and 40*). Exhibit includes a new Reflecting Objective, the characteristics of which permit its use over a wide range of the spectrum; New Phase and Laboratory Microscopes, with many optical and mechanical improvements; comparable models of Polarizing Microscopes, one with Polaroid and one with calcite prisms; and a Microtome for Ultra-Thin Sectioning will be demonstrated.

American Tobacco Company, Research Laboratory, Richmond, Va. (*Booths 34 and 39*). The roll of technology will be stressed in the selection and processing of tobacco, as well as the manufacture of tobacco products. The display will include samples of the more important tobacco types, suitably labeled and described, and a demonstration of specially designed laboratory instruments.

Ames Company, Inc., Elkhart, Ind. (*Booth 57*). A review of studies made on bile acids during the last twenty-five years. Pertinent data on toxicity, effect on bile flow, and composition of bile, test for bile acids in body fluids, and other relative information will be given in table form. Recommendations for further studies will be offered and bibliographic references will be made available to those interested in this field.

Armour and Company, Chicago, Ill. (*Booth 85*). Serving science and medicine—The Chemical Research and Development Department of Armour and Company presents the following specialty items for investigational use: purified hormones of animal origin, liver and plasma fractions, crystallized enzymes, substrates and inhibitors, ATP, catalases, animal lipids, and crystallized reference compounds.

Association of American University Presses, Chicago, Ill. (*Booth 7*). Distinguished for authoritative content and excellence of editorial work, books from university presses claim enviable rank among non-fiction and technical publications. An exhibit of books has been arranged for your enjoyment at this meeting, from Cambridge, Chicago, Columbia, Johns Hopkins, Minnesota, Princeton, Washington, Wisconsin and Yale.

Bausch & Lomb Optical Co., Rochester, N. Y. (*Booth 74*). Exhibit includes a wide-field microscope, normally used for examination of bacteria cultures, a new Model E research microscope, a Phase Contrast Microscope, a Balcoted Laboratory-type Microscope, and their recently announced Ultra-Violet Reflecting-type optics that are now being used in cancer research work.

J. Beeber Co. Inc., New York City (*Booth 31*). Exhibit of the Mikrark Illuminator, utilizing the Zirconium Arc Bulb, developed during the war. It is an outstanding light source, brilliant, cool, emanating from a point, sending out light of a

color temperature of 3200° K. Ideal for photomicrography and micro-projection.

Bilhuber-Knoll Corp., Orange, N. J. (*Booth 73*). A scientific exhibit of charts, reprints and bulletins describing their work and that of collaborators on the chemistry and pharmacology of the tetrazoles, aliphatic amines and aliphatic amino alcohols. The material presented includes pressor substances, antispasmodics, cardiac stimulants, convulsants, analgesics and depressants.

Blakiston Company, Philadelphia, Pa. (*Booth 47*). Their Spring line includes many new texts and new editions. Ask to see: Gribble's *Comparative Anatomy Laboratory Manual;* Gibbs' *Botany;* Rand's *Chordate Zoology;* Rugh's *Embryology of the Frog;* Bessey's *Morphology and Taxonomy of Fungi;* and Pattern's *Chick,* 4th Ed. See Blakiston's *New Gould Medical Dictionary,* the first completely new medical dictionary in 38 years. Blakiston's representative, Alden Elberson, will be glad to discuss these new texts and important books now in preparation.

S. Blickman, Inc., Weehawken, N. J. (*Booth 87*).

Camel Cigarettes, New York City (*Lounge*). Color slides of background data from their newest research. After weekly examinations of the throats of hundreds of men and women who smoked Camel Cigarettes exclusively for 30 days, throat specialists reported "Not one single case of throat irritation due to smoking Camels."

Central Scientific Company, Chicago, Ill. (*Booth 82*). Cenco will exhibit new scientific instruments and laboratory supplies of interest to biologists. The display will include a new versatile titration-p_H unit, a new radioactivity meter designed for instructional purposes, a plastics hemagglutination plate with 80 depressions, the improved Cenco du Nouy Tensiometer, all-metal slide rules and many other scientific items.

Cinchona Products Institute, Inc., New York City (*Booth 56*). A display showing colored illustrations of malaria plasmodia, pictures of the cinchona plantations in Java, the major research projects carried on in universities and medical schools here and in Holland. Literature on the use of cinchona alkaloids will be available for free distribution.

Clay-Adams Company, Inc., New York City (*Booth 25*). New developments in clinical laboratory equipment, particularly instruments for blood testing. There will also be a display of visual aids including Medichromes, 2 x 2-inch Kodachromes on the medical, nursing and biological sciences, skeletons, skulls, anatomical models and charts. You are invited to discuss your requirements for special instruments.

Coca-Cola Company, Atlanta, Ga. (*Lounge*). Ice-cold Coca-Cola served through the cooperation and courtesy of the Coca-Cola Bottling Company, Atlantic City, and the Coca-Cola Company.

Commercial Solvents Corporation, New York City (*Booths 76 and 77*). CSC pharmaceuticals will feature recent laboratory and clinical data on bacitracin and inositol. The exhibit will display curves showing the synergistic effects of bacitracin and penicillin in combination. Also covered will be the effect of inositol on serum cholesterol and lipid phosphorus in diabetics.

Encyclopaedia Britannica, Philadelphia, Pa. (*Booth 5*). Exhibit of the new post-war edition of *Encyclopaedia Britannica.*

R. Y. Ferner Company, Boston, Mass. (*Booth 55*).

Gamma Instrument Company, Inc., Great Neck, L. I., N. Y. (*Booth 11*). Exhibit includes the new Gamma U Camera, the highly versatile laboratory camera, also new accessories for the Chambers' Micro Manipulator and two models of the new Gamma Micro Positioners. These are instruments for manipulation of electrodes, needles and other instruments, especially for physiological work. Also shown will be the Oertling Micro Balance, reading directly to .001 mg. and the Bellingham and Stanley Research Polarimeter, with glass scale, reading to .10° and spectroscopic attachment for same.

Grass Instrument Company, Quincy, Mass. (*Booths 51 and 54*). Display of stimulators, preamplifiers and cameras for cathode-rays, cortical, depth, and stimulating electrodes, and other devices which are designed specifically for use in electro-physiological techniques.

Grune & Stratton, Inc., New York City (*Booth 96*). Notable among the books shown by Grune & Stratton are: Linksz: *Physiology of the Eye,* Volume I: *Optics;* Henderson: *Principles of Ophthalmology;* Negus: *The Comparative Anatomy and Physiology of the Larynx;* Soskin: *Progress in Clinical Endocrinology;* Vannotti and Delachaux: *Iron Metabolism and its Clinical Significance;* Hoch and Zubin: *Psychosexual Development in Health and Disease;* Dameshek and associates: *Chemotherapy of Leukemia and Leukosarcoma;* Penrose: *Biology of Mental Defect;* Swartz: *Elements of Medical Mycology.*

H. T. Hernberg Company, Philadelphia, Pa. (*Booth 29*). Hernberg has had many years experience in the fabrication and designing of animal cages. Of particular interest is the fact that the H. T. Hernberg Company will produce, for research scientists, cages built to their own specifications.

Paul B. Hoeber, Inc., New York City (*Booth 21*). Be sure to visit the Hoeber-Harper Booth. Among the most important books of 1950 for Federation members, the new 3rd Edition of McClung's *Handbook of Microscopic Technic* will be available for inspection there. The entire list of distin-

guished Hoeber books will also be on hand, including other important new titles such as Reynolds' *Physiology of the Uterus*, Gold's *Quinidine in Disorders of the Heart* and Jolliffe, Tisdall and Cannon's *Clinical Nutrition*.

Janke and Company, Inc., Hackensack, N. J. (*Booth 31*). Display of flame photometers.

Jarrell-Ash Company, Boston, Mass. (*Booths 92 and 93*).

Kelley-Koett Manufacturing Co., Instrument Division, Covington, Ky. (*Booth 63*). Manufacturers of nuclear instrument for the detection and measurement of radioactivity. Among others, the following instruments will be on display: Alpha, beta, gamma survey meters, binary and decade scalers, standard, hi-range and slow neutron dosimeters, 200 mrep, pocket chambers, slow neutron pocket chambers, uranium prospecting units, battery-condenser dosimeter chargers, charge readers, auto and elapsed time timers, radiation monitor, pocket audio detector.

Keystone Plastics Company, Swarthmore, Pa. (*Booth 45*).

Kimble Glass, division of Owens-Illinois Glass Company, Toledo, Ohio (*Booth 8*). Exhibit includes a representative line of Kimble laboratory glassware, including volumetric and calibrated apparatus. Products bearing the well-known trademarks Exax, Normax and "K" brand will be included as well as the Kimble Blue Ring Yellow Back thermometer.

Lea & Febiger, Philadelphia, Pa. (*Booth 26*). Lea & Febiger invites you to visit their booth and examine such outstanding books as Hartman and Brownell, *The Adrenal Gland;* Wiggers, *Physiology;* Goldberger, *Unipolar Lead Electrocardiography;* Starling, *Physiology;* Burch and Winsor, *Primer of Electrocardiography;* Gray, *Anatomy;* Wintrobe, *Clinical Hematology;* Thienes and Haley, *Clinical Toxicology;* Soffer, *Diseases of the Adrenals;* Buchanan, *Functional Neuro-Anatomy;* Bell, *Textbook of Pathology;* Katz, *Electrocardiography;* Boyd, *Textbook of Pathology;* Cushny, *Pharmacology and Therapeutics*.

Lederle Laboratories Division, American Cyanamid Company, New York City (*Booths 81–88*). Lederle Laboratories cordially invites you to visit their exhibit, where you will find representatives who are prepared to give you the latest information on Lederle products.

E. Leitz, Inc., New York City (*Booth 35*).

J. B. Lippincott Company, Philadelphia, Pa. (*Booths 65 and 72*). An interesting and active exhibit of professional publishing. With the "pulse of practice" centering in an advisory editorial board of active clinicians who constantly review the field, current and coming trends in medicine and surgery are known continually. On the studied recommendations of these medical leaders, Lippincott Selected Professional Books are undertaken.

Macmillan Company, New York City (*Booth 80*). Exhibit includes a large selection of its medical and college publications, featuring the new Green-Knox, *Research in Medical Sciences;* Penfield-Rasmussen, *The Cerebral Cortex of Man;* Landis-Bolles, *Textbook of Abnormal Psychology*, 2nd ed.; and Darlington-Mather, *Elements of Genetics*.

McGraw-Hill Book Company, Inc., New York City (*Booth 32*). Exhibit of selected list of medical and scientific books. The latest books in the National Nuclear Energy Series will be displayed. Of particular interest will be Hicks and Warren's *Introduction to Neuropathology*, Siri's *Isotopic Tracers and Nuclear Radiations*, Nonidez and Windle's *Textbook of Histology* and Cohn's *Clinical Electroencephalography*.

Merck & Co., Inc., Rahway, N. J. (*Booths 36 and 37*).

C. V. Mosby Company, Saint Louis, Mo. (*Booths 17 and 24*). A cordial invitation is extended to examine the many publications on display. Included will be new and recent editions of such popular texts as Zoethout and Tuttle's *Textbook of Physiology*, Dougherty and Lamberti's *Textbook of Bacteriology*, Francis and Knowlton's *Textbook of Anatomy and Physiology*, Davison's *Handbook of Materia Medica, Toxicology and Pharmacology*, and Roe's *Principles of Chemistry*. They will appreciate your visit as well as an opportunity to show any of their titles on subjects of interest to you.

Nuclear Instrument & Chemical Corporation, Chicago, Ill. (*Booth 64*). Display of instruments for use in radio tracer work and for control purposes in experimentation with radioisotopes. Instruments on display will include scaling and recording instruments, portable survey meters, personnel production devices, and standard and special counters of various types. Laboratory monitors, count-rate meters, and associated accessories will also be shown.

Perkin-Elmer Corporation, Glenbrook, Conn. (*Booth 41*). Exhibit includes: Flame photometer, for base iron analyses on biological samples; Tiselius electrophoresis apparatus, a compact instrument for obtaining electrophoretic patterns of physiological fluids. Also shown will be various types of spectroscopic equipment.

Philip Morris & Co. Ltd., Inc., New York City (*Booth 50*). Demonstration of the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss research on this subject, and problems on the physiological effects of smoking.

Phipps & Bird, Inc., Richmond, Va. (*Booth 2*).

Co-featured will be its new Walton Kymograph developed for the researcher along with the improved Van Slyke Blood Gas Apparatus. They will have a complete display of kymographs, levers, tambours, manometers and related instruments. Their engineers will welcome any suggestions for new equipment.

Radiation Counter Laboratories, Inc., Chicago, Ill. (*Booths 12 and 13*). A complete mobile radioactivity measurement laboratory is in operation within a truck. With this laboratory, which is a prototype for a biologist, quantitative radioactive measurements may be made. Health protective devices are also shown. All units are in operation with a radio chemist in charge.

Sanborn Company, Cambridge, Mass. (*Booth 20*). Their exhibit includes the direct-writing multi-channel biophysical recorder (Poly-Viso), the high natural frequency Electromanometer for direct pressure recording, the photographic Instomatic Cardiette, the direct-writing Viso-Cardiette, the Metabulator, latest model metabolism tester, the Electrophrenic Respirator, and the Ballistocardiograph.

Sandoz Pharmaceuticals, New York City (*Booths 9 and 16*).

W. B. Saunders Company, Philadelphia, Pa. (*Booth 1*). Saunders cordially invites you to visit its exhibit and inspect text and reference books in the fields of chemistry, anatomy, physiology, biochemistry, bacteriology, zoology, nutrition and pharmacology. See the new Romer, *The Vertebrate Body;* Fulton, *Physiology;* and Allee, *Animal Ecology*, and other important new books.

Ivan Sorvall, Inc., New York City (*Booths 91 and 94*). This exhibit features chiefly Servall Angle Centrifuges available in small clinical machines, large capacity machines for bottles, vacuum-operated machines for high-speed and refrigerated machines. They also manufacture and distribute the Sterling Automatic Pipette, Servall Magnetic Stirrers, original Odhner calculators for scientists, Van Slyke apparatus, blood sedimentation test apparatus and other specialties.

Sharp & Dohme, Inc., Medical Research Division, Glenolden, Pa. (*Booths 66 and 71*). Benemid, p(di-n-propylsulfamyl)-benzoic acid, is a new compoune synthesized in the Department of Organic Chemistry of this Division. The compound has been selected to illustrate the fundamental nature of the research employed in the preclinical study of a potentially useful drug. The enzymatic mode of action, its comparative effects on conjugation reactions, the pharmacological application of those principles, the fate of the drug in the body and its toxicological evaluation will be presented diagramatically.

E. R. Squibb & Sons, New York City (*Booth 46*).

Technicon Company, New York City (*Booths 89, 90 and 95*). *Biochemists:* New Technicon Automatic Fraction Collector, newly designed, time-operated, automatic fraction collection apparatus. Micro-Pump, a new pump for delivery of from 0 to 0.1 ml. per stroke and graduated in 0.0005 ml. with unprecedented accuracy and reproducibility. Technicon Automatic Pipette Washer. *Physiologists:* Technicon Cardiograph, a direct-writing instrument with simultaneous three-channel recording. So improved that it offers the ultimate in recording fidelity. Technicon Vectorscope for three-channel oscilloscope recording. *Pathologists and Microscopists:* Technicon Microscope Lamp, a radically different microscope lamp. Autotechnicon for automatic processing and staining of histologic sections. Scopicon for the finest in microprojection. Technicon Paraffin Knife, a new heated paraffin knife. Technicon Microslide Dryer. Lab-Aid Slide Filing System for microslides and photographic slides. Technicon Constant Temperature Water Bath for floating paraffin sections. Technicon standardized histologic reagents.

Technitrol Engineering Company, Inc., Philadelphia, Pa. (*Booth 4*). Exhibit of Technitrol line of electromedical instruments consisting of the Lilly Manometer for recording cardiovascular pressures, the horizontal Ballistrocardiograph, and the Recording Flowmeter for recording respiration rates and volumes. These instruments will be set up and those interested will have an opportunity to operate them.

Arthur H. Thomas Company, Philadelphia, Pa. (*Booth 68*). Display includes: Kymographs; Electric Stylus Input Control for dry recording on electro-sensitive paper, for making permanent kymograph records without use of smoked paper or ink; Electronic Stimulator; Inductorium, improved model; Stadie-Riggs Tissue Slicer; Barcroft-Warburg Apparatus; Electric Time Markers; clamps for use in physiology and pharmacology, and other items for laboratory use.

Charles C Thomas, Springfield, Ill. (*Booth 49*). Many new titles in the American Lecture Series (especially the Physiology, Neurology, and Pathology subject divisions) are displayed for your consideration. Just published are: Marriott's *Water and Salt Depletion;* Engel's *Fainting;* and Dry's *Congenital Anomalies of the Heart and Great Vessels*. Don't miss *Manual of Clinical Laboratory Methods* (4th Ed.) and Kabat and Mayer's *Experimental Immunochemistry*. If we can be of any service at this meeting or anytime, please let us know.

Tracerlab, Inc., Boston, Mass. (*Booths 10 and 15*). Display of basic instruments required for a radioactivity laboratory, including scalers, sample holders, and sampler changers. Radiation survey

meters will be demonstrated and thin mica end-window and all-glass Geiger tubes will be displayed. Other equipment including remote pipetting devices, remote handling tongs, lead bricks, film badges and miscellaneous specialized equipment will be on exhibit.

U. S. Testing Company, Hoboken, N. J. (*Booth 28*).

Waters Conley Company, Rochester, Minn. (*Booth 44*). Exhibit of their new Absolute Reading Oximeter which offers immediate indications of the percentage of oxygen saturation in the whole blood. Of especial interest should be the simiplified model of this Oximeter which will be offered at a price that will make it practical for use by every hospital and heart specialist. Also on exhibit will be their Kymographic Recording Camera and Cardiotachometer.

Wyeth Inc., Philadelphia, Pa. (*Booths 27 and 30*).

John Wiley & Sons, Inc., New York City (*Booth 23*). Publishers of scientific and technical books for 143 years. A display of a large selection of books in biology, chemistry, bacteriology and related sciences. The firm's latest publications, as well as standard text and reference books, are available for inspection. Wiley editors in biology and other staff members will be present.

Member Exhibits

Self-contained oscillographic unit for electrophysiology; direct writing strain gage plethysmograph; direct recording pulse rate counter. Harry Grundfest, Robert Schoenfeld, Michael Tobin, Oursa N. Dagavarian and Joseph Siegel, Columbia University, New York City (*Booth A*). *a*) A complete two-beam CRT unit, including high gain differential amplifiers and a two-channel stimulator. *b*) Electronic instrument recording changes in finger volume as inked records. *c*) Electronic pulse rate counter with rapid response time, giving direct meter reading of rate and capable of ink recording of same.

Electrolyte studies in experimental and clinical edema. Samuel A. Corson, Elizabeth O'Leary, Abraham L. Siegel, Mitchell W. Spellman and Esther Harrison, Toledo Hospital and Institute of Medical Research, Toledo, Ohio (*Booth B*). The exhibit will include charts and graphs describing electrolyte patterns (especially for Na and K) in experimental hypoproteinemic edema and in clinical cardiac and nephrotic edema with particular reference to the effects of neutral and alkalinizing sodium salts.

Subcutaneous and intravenous injection drugs from a distance. T. H. Mackenzie, C. E. Ellicott, H. Teitelbaum, V. L. Otterbach and W. H. Gantt, Johns Hopkins University, Baltimore, Md. (*Booth C*). A method of injecting drugs subcutaneously and intravenously with dog in room alone isolated from experimenter in order to study effect of drugs on heart rate and behavior without disturbing effect of person or repeated introduction of needle.

Student kymograph and accessories. A. E. Livingston, Temple University, Philadelphia, Pa. (*Booth D*). A new design of an inexpensive kymograph, signal magnet, new form of writing lever.

Pan-radiometer. James D. Hardy, Charles H. Richards, Alice M. Stoll, Cornell University, New York City (*Booth I*). The instrument for measuring the total thermal radiation of an environment consists of four silverspheres, two of which are polished, one of which is black and one of which is white. By bringing the spheres to the same temperature with heat supplied to a coil inside the spheres, it is possible to measure thermal radiation in the visible and infrared parts of the spectrum in indoor and outdoor environments. A small portable radiometer for measuring the temperature of the sky and terrestrial environment will also be shown.

Apparatus for sampling and equilibration of respiratory gases in non-cooperative subjects. C. A. Forssander, University of Pennsylvania, Philadelphia (*Booth J*). A mechanical sampling device employing an oral suction principle, which permits samples of alveolar air closely approximating to Haldane-Priestley samples to be obtained without disturbing the respiratory pattern, and which is also adapted for sampling after the introduction of gas mixtures into the lungs.

Mass spectrometer for use in study of respiratory problems. Fred A. Hitchcock, Ohio State University, Columbus (*Booth K*). Graphs, charts and photographs.

Research fellowship program, Public Health Service. National Institutes of Health, Bethesda, Md. (*Booth L*). The exhibit shows graphically how the Federal Government is helping to develop the research potential of the nation by supporting promising researchers at non-Federal institutions from coast to coast.

Gradient calorimeter and 4 π radiometer. T. Benzinger and C. Kitzinger, Naval Medical Research Institute, Bethesda, Md. (*Booth M*). A rapidly responding calorimeter recording total heat output as a single thermoelectric potential. A black body, uniformly lined with new surface receivers for thermal radiation, for continuous recording of total radiated heat loss of average

skin temperature, in a single thermoelectric potential.

A recording two channel photofluorometer and automatic syringe for *in vivo* studies using fluorescein. David Minard, E. F. Osserman and Maynard Eicher, Naval Medical Research Institute, Bethesda, Md. (*Booth N*). A simple circulatory model is used to demonstrate the application of a recording two channel photofluorometer and an automatic syringe in circulatory studies using fluorescein. Sample records of studies on kidney, skin and brain circulation will be shown.

Body composition. A. R. Behnke, Naval Medical Research Institute, Bethesda, Md. (*Booth N-1*).

Studies in the history of goiter. Isidor Greenwald, New York University, New York City (*Booth O*). A series of maps with legends showing the history of goiter in various parts of the world: usually sudden increases, but also decreases, even disappearances, with recurrence after many years.

Use of televised microscopy in biological studies. A. K. Parpart, K. W. Cooper and S. Inoue, Princeton University, Princeton, N. J. (*Booth P*). Various living and stained cells will be shown by a new technique combining microscopy and television. A striking feature is the degree of contrast obtainable.

Human malignant hypertension due to a true 'Goldblatt kidney' found by diodrast arteriogram and corrected by nephrectomy. Joseph T. Roberts, Veterans Hospital, Buffalo, N. Y. (*Booth Q*). Charts, x-rays and photographs depict the correction of a very malignant hypertension in a young man having a nodule in the wall of the left renal artery.

Photoelectric cardiac rate counter for speeds below 400 per minute. F. F. Anderson, Ciba Pharmaceutical Products, Inc., Summit, N. J. (introduced by F. F. Yonkman) (*Booth V*). A photoelectric relay is activated by a writing lever through a pneumatic system; a vertical recorder in series with the relay marks the rate on smoked paper.

Prothrombin determinations. Clifford F. Gerber and Ernest W. Blanchard, Schieffelin & Co., New York City (*Booth W*). Charts and tables showing the effect of certain variables, such as oxalation, centrifugation, temperature, etc., upon prothrombin time as determined by the one-stage method.

New electronic recording and indicating devices. Michael Kniazuk, F. Robert Prediger, Samuel Kuna and Robert E. Sniffen, Merck Institute, Rahway, N. J. (introduced by Hans Molitor) (*Booth Y*). Three laboratory indicating and recording aids recently developed at the Merck Institute for Therapeutic Research will be demonstrated.

Arctic research. M. C. Shelesnyak, Arctic Institute of North America. (*Booth Z*). Wall chart describing Grant-in-Aid, Arctic Field Research groups.

DIRECTORY OF COUNCIL AND COMMITTEE MEETINGS AND SPECIAL FUNCTIONS

Sunday, April 16

Federation Executive Committee: 6:00 P.M. (*Club Room, Traymore*)
Physiology Council: 9:00 A.M.; 1:00 P.M.; 7:00 P.M. (*Room 125, Traymore*)
Biochemistry Council: 9:00 A.M.; 1:00 P.M.; 7:00 P.M. (*Room 126, Traymore*)
Pharmacology Council: 10:00 A.M.; 1:00 P.M.; 7:00 P.M. (*Room 127, Traymore*)
Nutrition Council: 1:00 P.M. (*Room 129, Traymore*)
Immunology Council: 1:00 P.M. (*Room 130, Traymore*)
Pharmacological Reviews, Editorial Board: 2:00 P.M. (*Chippendale Room, Traymore*)
Pharmacology, Board of Publications Trustees: 6:00 P.M. (*Mandarin Room, Traymore*)

Monday, April 17

Federation Proceedings Control Committee: 9:00 A.M. (*Pine Room, Traymore*)
Federation Executive Committee: 3:00 P.M. (*Club Room, Traymore*)
Physiology Council: 9:00 A.M.; 8:00 P.M. (*Room 125, Traymore*)
Biochemistry Council: 9:00 A.M.; 1:00 P.M.; 7:00 P.M. (*Room 126, Traymore*)
Pharmacology Council: 10:00 A.M. (*Room 127, Traymore*)
Pathology Council: 10:00 A.M. (*Room 128, Traymore*)
Nutrition Council: 9:00 A.M.; 1:00 P.M.; 7:00 P.M. (*Room 129, Traymore*)
Immunology Council: 10:00 A.M.; 8:00 P.M. (*Room 130, Traymore*)
American Association of Biological Chemists, Committee on Clinical Chemistry: 1:30 P.M. (*Pine Room, Traymore*)
Pharmacology Society, Board of Publications Trustees: 8:00 A.M. (*Mandarin Room, Traymore*)
Pharmacological Reviews, Editorial Board: 10:00 A.M. (*Chippendale Room, Traymore*)
Annual Review of Physiology, Editorial Meeting: 2:00 P.M. (*Mandarin Room, Traymore*)
Society for Experimental Biology and Medicine, Advertising Committee: 9:30 A.M.; Membership Committee: 4:15 P.M. (*Room 19, Convention Hall*)
Poultry Nutrition Discussion Group: 2:00 P.M.; 7:00 P.M. (*Room 18, Convention Hall*)
Physiological Effects of Radiation: Informal Discussion Group, 8:00 P.M. (*Room 15, Convention Hall*)
Conference on Synthesis of Isotopically Labeled Compounds: 2:00 P.M. (*Room 15, Convention Hall*)

LUNCHEONS:

Society for Experimental Biology and Medicine, Editorial Board: 12:00 M. (*Dennis*)

DINNERS

Nutrition Reviews, Editorial Board: 6:00 P.M. (*Traymore*)
Society for Experimental Biology and Medicine, Council: 6:15 P.M. (*Dennis*)
Editorial Board, American Physiological Society: 6:00 P.M. (*Claridge*)

Tuesday, April 18

Society for Experimental Biology and Medicine, Secretaries' Meeting: 9:30 A.M.; Finance Committee: 11:30 A.M.; Miscellaneous Conferences: 1:30 P.M. (*Room 19, Convention Hall*)
Biochemistry Council: 7:00 P.M. (*Room 126, Traymore*)

LUNCHEONS

University of Illinois Alumni: 12:15 P.M. (*Madison*)

Wednesday, April 19

Physiology Council: 11:00 A.M. (*Room 125, Traymore*)
Pharmacology Council: 10:00 A.M. (*Room 127, Traymore*)

DINNERS

* Temperature Regulation Section, Physiology Society: 6:30 P.M. (*Solarium, Jefferson*)
Thudichum Society: 7:00 P.M. (*Solarium, Madison*)
Standardization of Symbols Used in Respiratory Physiology, Informal Discussion Group: 6:30 P.M. (*Dolly Madison Room, Madison*)

Thursday, April 20

Federation Executive Committee: 9:00 P.M. (*Club Room, Traymore*)
Physiology Council: 7:00 P.M. (*Room 125, Traymore*)

* Attendance by invitation.

Biochemistry Council: 7:00 P.M. (*Room 126, Traymore*)
Pathology Council: 7:00 P.M. (*Room 128, Traymore*)
Nutrition Council: 7:00 P.M. (*Room 129, Traymore*)
Immunology Council: 7:00 P.M. (*Room 130, Traymore*)
Nutrition of the Mouse, Symposium: 7:30 P.M. (*Room 19, Convention Hall*)

DINNERS

* Circulation Section, Physiology Society: 6:30 P.M. (*Jefferson*)
* Metabolism Discussion Group: 6:30 P.M. (*Loggia, Jefferson*)
Coagulation, Informal Discussion Group: 6:30 P.M. (*Colonial Room, Madison*)

* Attendance by invitation.

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